CATEGORICAL EXCLUSION
for
RS 382-1 (5) 4

Perma Canyon - North
Secondary Highway 382
Sanders County, Montana
Control No. 2026

Submitted Pursuant to:

23 CFR 771.117(d)
and
ARM 18.2.261 Sections 75-1-103 and 75-1-201, MCA

Submitted By:

CARTER & BURGESS, INC.
for the
MONTANA DEPARTMENT OF TRANSPORTATION

August 1996

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August 1996

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CE Concurrence Request Letter to Jerry J. Cloud, FHWA

August 16, 1996

Mr. Jerry J. Cloud, Acting Division Administrator
Federal Highway Administration (FHWA)
301 So. Park, Drawer 10056
Helena, MT 59626

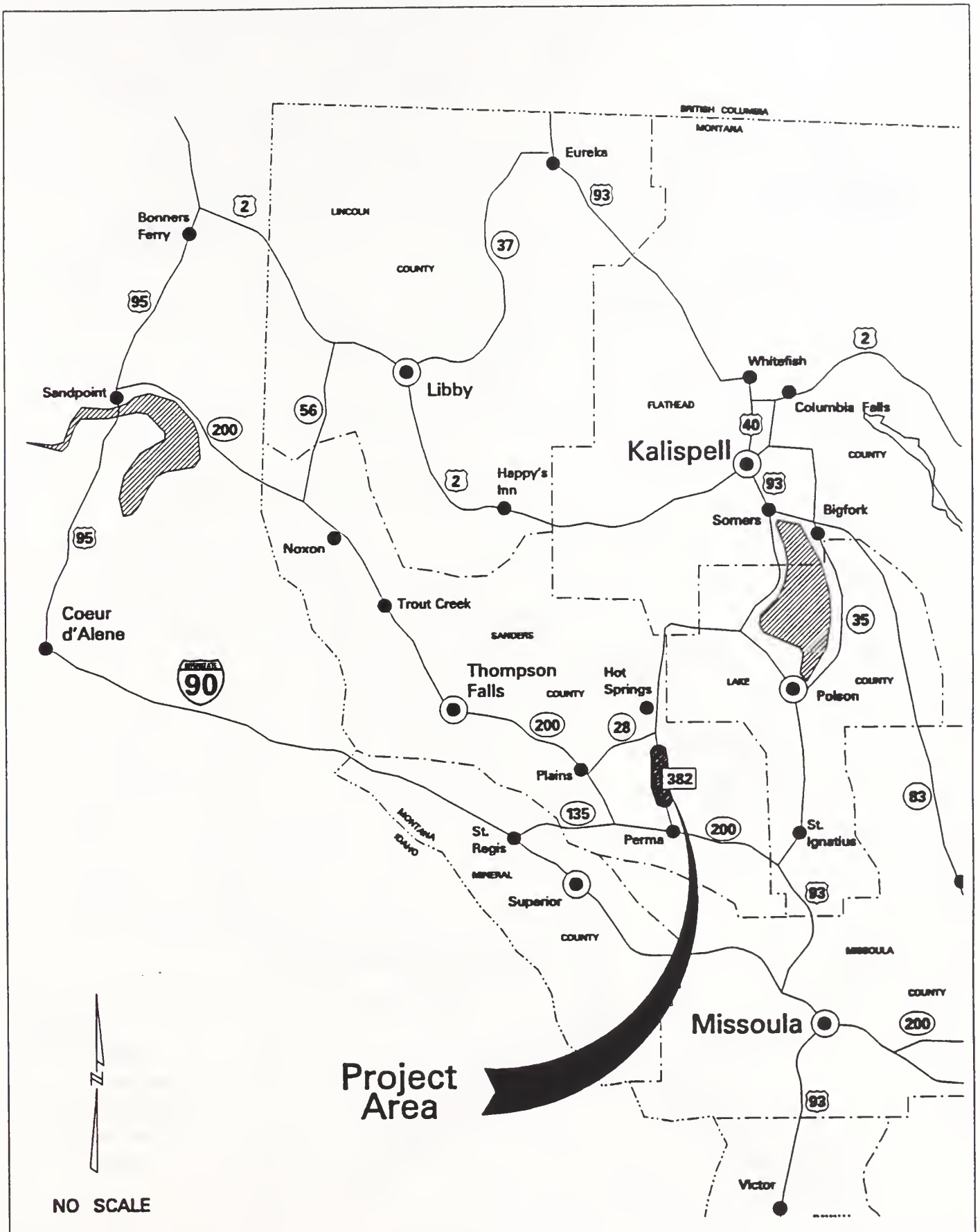
Subject: RS 382-1 (5) 4
Perma Canyon - North
Control No. 2026

This is a request for the FHWA's concurrence that this proposed project meets the criteria for classification as a Categorical Exclusion under the provisions of 23 CFR 771.117(d). This proposed action also qualifies as a Categorical Exclusion under the provisions of ARM 18.2.261 (Sections **75-1-103** and **75-1-201, M.C.A.**). See Figure 1 for a project location map.

This proposed project consists of a 45 mm (0.15 foot) overlay, improvement of clear zones, minor widening, mail box turnouts and minor slope flattening. No horizontal or vertical realignments are proposed. A finished surface width of 7.2 meters (23.6 feet) is proposed, to place this overlay on the existing 6 meter (20 feet) top. The project area is rural with several residences located within 15 to 46 meters (50 to 150 feet) of the right-of-way, with the closest residence located within about 15 to 18 meters (50 to 60 feet) of the existing right-of-way. The proposed project would require acquisition of approximately 1.28 hectares (3.17 acres) of additional right-of-way. No existing structures would be displaced as a result of the proposed project.

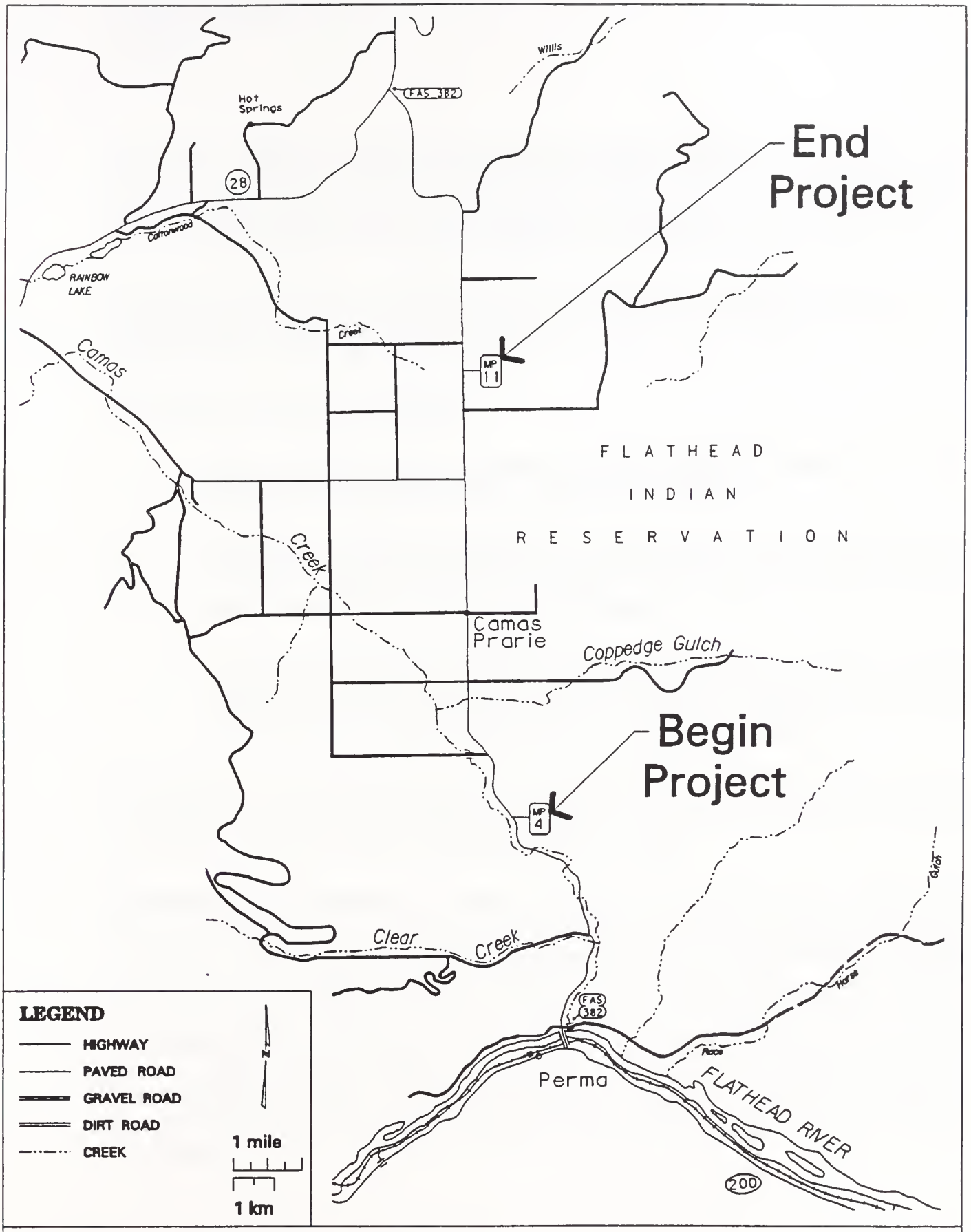
The location of this project is Secondary Highway 382 in Sanders County on the Flathead Reservation from MP 3.9, extending 11.4 kilometers (7.1 miles) to MP 11.0. See Figure 2 for a project area map.

The intent of this project is to prolong the useful life of the pavement, improve the roadway and to enhance safety while utilizing the present-traveled-way (PTW) to achieve a 80 kilometers per hour (50 mph) design speed.



Perma Canyon – North

REGIONAL MAP
Figure 1



Perma Canyon – North

AREA MAP
Figure 2

from scour. There are areas within the proposed project limits (Station 80 + 50) where Camas Creek is in close proximity to the roadway. Riprap revetment is planned for this area to protect the roadway embankment against scour. No changes to the existing culverts is part of this proposed project, nor are any new culverts proposed.

Based on the fact that the culverts associated with this roadway are sufficiently protected against scour, the potential for future culvert failure during a flood of the magnitude of a 50-year event is not expected.

The project will involve the following:

- Slope flattening / minor fills along the existing highway alignment within the floodplain. This material will be composed earthen fills.

- Riprap (rock) revetment placed on the roadway side slopes in areas susceptible to scour during flood events. The majority of this work will occur within the estimated floodplain but not in the active channel.

- It is expected that minor realignment of the active channel will occur in the area of Station 80+40 left to Station 80+60 left. The slope is expected to be armored by riprap (rock) revetment to resist scour of the roadway subgrade.

This proposed project will not promote or encourage development within this delineated floodplain, nor increase flood liability hazards from its construction. This proposed project is therefore considered to be in compliance with E.O. #11988.

Historical/Cultural Resources - A Cultural Resource Inventory Report, dated November 21, 1995, was prepared by a cultural resource consultant. Two sites, the Barth Residence (24SA386) and the School, Gym, and Teacherage (24SA392), are recommended as eligible for listing in the National Register of Historic Places. The Montana State Historic Preservation Office (SHPO) has concurred with these recommendations of eligibility (see correspondence in Appendix A). A recommendation for a determination of no effect to the two eligible sites was made to the SHPO. The SHPO has concurred with the determination of no effect. (See correspondence in Appendix A.) MDT will notify the Kootenai and Flathead Cultural Committees two weeks prior to the start of project construction.

Section 1: Impact Areas With No Adverse Effect

This proposed project has been evaluated for, and does not have any adverse effect on the following environmental areas of concern:

Floodplains (E.O. 11988/FEMA)	USDOT - *4(f)/NL&WCF - 6(f) Act*
Hazardous Waste	Air Quality
Historical/Cultural Resources	Social/Economic/ Environ. Justice (E.O. 12898)
Changes in Land Use	T&E Species

Hazardous Waste - Rural Secondary Highway 382 follows the canyon as does the recently terminated Yellowstone Petroleum Pipeline, until crossing this road at approximately milepost 2. Precipitating this termination was the 1992 discovery of a 37,878 liter (10,000 gallon) spill which entered Camas Creek some 3.2 km. (2 mi.) west of milepost 8. Though not a concern for this specific project due to the distance of the event from Secondary Highway 382, this event contaminated roughly 6.4 km (4 mi.) of creek and associated habitats. (Jackson, pers. comm.).

Floodplains - The Camas Creek floodplain has not been delineated, therefore detailed floodplain information is not available. Camas Creek has a history of flooding with the last substantial flood occurring on February 24, 1986. The flow of this flood was 42 cubic meters (1,400 cubic feet) per second. MDT estimated it to be a 125-year flood. The roadway has been protected with riprap revetment in numerous locations through the Canyon. The proposed work will include a new roadway surface pavement and safety improvements such as slope flattening. The proposed project is not expected to involve any crossings of the creek or fills of the magnitude that would affect the current 100-year floodplain. Therefore, it is expected that the project will have a negligible effect on the water surface profile and the area inundated by the 100-year event.

Secondary Highway 382 closely parallels Camas Creek through Perma Canyon. Flows of 3,200 cfs during a 1988 flood resulted in the failure of a culvert that was under construction by MDT. Three culverts were constructed in 1988. All three culverts were installed with concrete edge protection to prevent scour around the ends of the culverts. At the time of the flood in 1988 the concrete edge protection of one of the culverts had not been completed. This culvert was washed out in the flood. The other two culverts that had been completed remained intact. After the 1988 flood event in the following year the roadway was constructed between the Flathead River and Mile Post 4. Riprap revetment was placed in areas to protect the roadway embankment

Section 2: Impact Areas With Minor Effect

The proposed project will have a minor effect on the following environmental area(s):

Stormwater Runoff - Additional impervious surfaces, including mailbox turnouts, will be constructed as part of the proposed project. The increase in surface runoff is expected to be insignificant, due to the relatively small amount of impervious surface added as part of this project.

Wetlands/Section 404 Clean Water Act - A total of 0.24 hectares (0.59 acres) of wetlands will be subject to unavoidable impacts of this project. A full description of wetland impacts and potential mitigation is provided in the Wetlands Finding, included as part of the Biological Resource Report in Appendix B.1 of this document.

Air Quality - There will be minor, temporary increases in dust during the construction phase of this project. This proposed project is located in a Class I Air Shed on the Flathead Reservation (McCloud, pers. comm.). As such, this proposed project is not covered under the U.S. Environmental Protection Agency's **Final Rules** of November 24, 1993 on Air Quality conformity. Therefore, this proposed project complies with the intent of Section 176(c) of the *Clean Air Act* as amended **42 U.S.C. 7521(a)**.

Noise - There will be minor, temporary noise impacts to nearby residences during the construction phase of this project. Design year noise levels will not exceed the Noise Abatement Criteria (23 CFR Part 722). Traffic noise level increases will be insignificant with the construction of this project. See Helm memo dated February 5, 1996 in Appendix A.

Utilities - The project will require relocations of telephone and electric utilities in many areas.

Stream Preserv./Water Quality - Within the project limits, Secondary Highway 382 parallels and crosses tributaries of Camas Creek. The Confederated Salish and Kootenai Tribes (CSKT) adopted water quality standards and anti-degradation policy in 1995 and have classified Camas Creek as a B-1 waterbody. Streams with this classification are suitable for drinking, culinary or food processing purposes, after conventional treatment; bathing, swimming, and recreation; growth and propagation of salmonid fishes and

In addition, if any cultural resources are found during construction, work shall stop and the MDT archaeologist or historian will be contacted, who will then consult with both the Flathead and Kootenai Cultural Committees.

Changes in Land Use - This project will not induce substantial land use changes or promote unplanned growth. There will be no substantial effects on access to adjacent properties or present traffic patterns.

Social/Economic/Environmental Justice - The proposed project will not affect, separate, or isolate any distinct neighborhoods, low income groups, ethnic groups, or other specific groups of people. No displacements or relocations will be caused by the project. A short-term benefit that may be derived from this project is employment for some area residents during construction.

USDOT - 4(f)/NL&WCF - 6(f) Acts - The proposed project will not require the use of any publicly owned land from a public park, recreational area, wildlife and waterfowl refuge lands or historic sites, therefore a 4(f) statement will not be required. No Land and Water Conservation Funds have been used on any properties subject to impact by this project, therefore no 6(f) impacts will result from project implementation.

Threatened/Endangered Species - The U.S. Department of the Interior's Fish & Wildlife Service (USF&WS) was contacted for identifying Federally-listed Threatened/Endangered Species under *Section 7(a)* of the *Endangered Species Act* (**16 U.S.C. 1531 - 1543**). The following Threatened/Endangered Species were identified by both the USF&WS, and the **Biological Resources Report** (BRR) (see Appendix B) as being in the vicinity of this proposed project:

The following Threatened/Endangered Species may occur in the general project area:

> The peregrine falcon (Falco peregrinus) is an endangered raptor species in Montana.
>
> The bald eagle (Haliaeetus leucocephalus) is a threatened raptor species in Montana.

The CSKT recommends placement of wildlife crossing signs at each end of Perma Canyon as described in the BRR. The project is not likely to adversely affect either the peregrine falcon or the bald eagle, provided that certain measures are implemented as described in the BRR.

Confederated Salish and Kootenai Tribal Aquatic Lands and Conservation Ordinance.

This proposed project will require the following permits under the *Clean Water Act* (**33 U.S.C. 1251 - 1376**):

A CSKT Tribal 401 Certification.

A *Section 404* permit from the U.S. Army - Corps of Engineers. The COE will determine if this proposed project qualifies for a "Nationwide" 404 permit under the provisions of **33 CFR 330**.

In accordance with **7-22-2152**, and **60-2-208 M.C.A.**, MDT will re-establish a permanent desirable vegetation community along all areas disturbed by the proposed construction. A set of revegetation guidelines will be developed by MDT that must be followed by the contractor. These guidelines will be in conformance with the Sanders County Weed Control Permit Application. In addition, MDT's efforts will be coordinated with the CSKT 1993 Integrated Noxious Weed Management Plan to ensure compatibility. These specifications will include instructions on seeding methods, seeding dates, types and amounts of mulch and fertilizer, along with seed mix components. Seed mixes include a variety of species to assure that areas disturbed by construction are immediately stabilized by vegetative cover. The Seeding Special Provisions developed for this proposed project will be forwarded to the Sanders County Weed Board for approval.

Americans With Disabilities Act - Does not apply to this project.

Approximately four construction permits will be needed for this proposed project, requiring about 0.23 hectares (0.57 acres).

A news release will be submitted to the local newspaper.

The Confederated Salish and Kootenai Tribes have been requested to be a Cooperating Agency on this proposed project under the provisions of 23 CFR 771.111(d).

In accordance with 23 CFR 771.117(a), this action will neither individually or cumulatively, have any significant environmental impacts. Therefore, we are requesting FHWA's concurrence that this proposed project is properly classified as a Categorical Exclusion.

associated aquatic life, waterfowl and furbearers, and agricultural and industrial water supply.

There may be some sedimentation which could occur as a result of construction activities; however, with implementation of standard procedures designed to protect water quality during and after construction as described in the MDT Highway Construction Standard Erosion Control Work Plan, any impacts associated with sedimentation will be alleviated.

All work will also be in accordance with the Water Quality Act of 1987 (P.L. 100-4), as amended.

An Erosion Control Plan will be prepared for this proposed project. Best Management Practices will be included in the design of this Plan using guidelines as established in MDT's Highway Construction Standard Erosion Control Workplan. The objective is to minimize erosion of disturbed areas during and following construction of this proposed project.

Prime & Unique Farmlands – This proposed project will impact 1.0 hectare (2.4 acres) of land designated as prime when irrigated by the US Department of Agriculture's Natural Resource Conservation Service. A Farmland Conversion Impact Rating form (#AD-1006) was completed for this proposed project in accordance with the Farmland Protection Policy Act (FPPA - 7 U.S.C. 4201, et seq.). The Total Points for this proposed project's Site Assessment Criteria are less than 160. Therefore, under 7 CFR 658.4(c) no additional consideration for protection is necessary. A copy of this form is contained in Appendix A.

Section 3: Permits Required

Permits Required - The following permits will be acquired prior to any relevant disturbance:

A Notice of Intent for Storm Water Discharges under the National Pollutant Discharge Elimination System (NPDES) General Permit (PL 92-500) will be required with the US Environmental Protection Agency for the control of stormwater runoff.

An ALCO Permit Number 87A will be required by the Confederated Salish and Kootenai Tribes. This proposed project will be in compliance with the

Joel M. Marshik, P.E., Manager
Environmental Services

Concur _____ Date 8-22-96
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

JMM:GS:jl:

Attachments
cc: James Weaver, P.E. - District Administrator
Carl S. Peil, P.E. - Preconstruction Engineer
Joseph P. Kolman, P.E. - Bridge Engineer
Thomas E. Martin, P.E., Chief, Right-of-Way Bureau
David W. Jensen, Supervisor - Fiscal Programming Section
Mark A. Wissinger, P.E., Supervisor - Contract Plans Section
Joel M. Marshik, P.E., Manager - Environmental Services
Jeanette Lostracco, AICP, Carter & Burgess, Inc.

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)	Date of Land Evaluation Request 12/18/95
Name of Project Perma Canyon North, MT 382	Federal Agency Involved USDoT - Federal Highway Administration
Proposed Land Use Highway Right-of-Way	Sanders County, Montana
PART II (To be completed by SCS)	Date Request Received by SCS

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply - do not complete additional parts of this farm.)	Yes ☐ No ☐	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land in Govt. Jurisdiction Acres: %	Amount of Farmland as Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of Local Site Assessment System	Date Land Evaluation Returned by SCS	

PART III (To be completed by Federal Agency)	Alternate Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres to be converted directly	2.4			
B. Total Acres to be converted indirectly	0			
C. Total Acres in Site	2.61			
PART IV (To be completed by SCS) Land Evaluation Information				
A. Total Acres Prime and Unique Farmland				
B. Total Acres Statewide and Local Important Farmland				
C. Percentage of Farmland in County or Local Govt., unit to be converted				
D. Percentage of farmland in Govt. Jurisdiction with same or higher relative value.				
PART V (To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to be converted (Scale of 0 to 100 Points)				

PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.8(b))	Max. Pts.				
1. Area Nonurban Use	15	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent of Site Being Farmed	20	15			
4. Protection Provided by State and Local Govt.	20	0			
5. Distance from Urban Builtup Area	N/A	--			
6. Distance to Urban Support Services	N/A	--			
7. Size of present farm unit compared to average	10	0			
8. Creation of nonfarmable farmland	25	0			
9. Availability of farm support services	5	0			
10. On-farm investments	20	7			
11. Effects of conversion on farm support services	25	0			
12. Compatibility with existing agricultural use	10	0			
TOTAL SITE ASSESSMENT POINTS	160	47			
PART VII (To be completed by Federal Agency)					
Relative value of farmland (From Part V)	100	100			
Total Site Assessment (From Part VI above or a local site assessment)	160	47			
TOTAL POINTS (Total of above 2 lines)	260	147			

Site Selected: Existing Corridor	Date of Selection 12/18/95	Was a Local Site Assessment Used? Yes X No ☐

Reason for Selection: Site A: Since the total socre is less than 160, no further sites need to be considered as stated in CFR 658.4(c), Part (2) - page 27725 of Vol. 49 FR # 130: "Sites receiving a total score of less than 160 be given a minimum level of considerations for protection and no additional sites be evaluated."

(See instructions on reverse side) Form AD-1006(10-83)

Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

November 27, 1995

Paul Putz
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: RS 382-1(5)4
Perma Canyon - North
Control No. 2026

Enclosed is the cultural resource report, CRABS and site forms for the above project. Kathy McKay recorded twelve historic sites, two of which, the Barth Residence (24SA386) and School, Gym and Teacherage (24SA392), she recommends as eligible for the NRHP under Criteria A and C. We agree with her recommendation and request your concurrence. McKay also recorded a section of the old county road (24SA384). Because of the Historic Roads and Bridges Programmatic Agreement, no Determination of Eligibility is necessary.

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If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosures

cc: James Weaver, P.E., Missoula District Administrator
Carl Peil, P.E., Preconstruction Bureau
Gordon Stockstad, Resources Section
Jeannette Lostracco, Carter-Burgess
Terry Tanner, Flathead Culture Committee w/attach.
Clarinda Burke, Kootenai Culture Committee "

THE CONFEDERATED SALISH AND KOOTENAI TRIBES
OF THE FLATHEAD NATION
P.O. Box 278
Pablo, Montana 59855
(406) 675-2700
FAX (406) 675-2806

April 18, 1996

Jeanette Lostracco
Carter & Burgess, Inc.
216 16th Street Mall
Denver, Colorado 80202

RE: Draft Categorical Exclusion for Montana Department of Transportation, Perma Canyon-North Project

Dear Ms. Lostracco:

Thank you for the opportunity to comment on the Categorical Exclusion document for the Montana Department of Transportation's Perma Canyon - North project. These are our comments:

Water Quality. The Confederated Salish and Kootenia Tribes (CSKT) adopted surface water quality standards and antidegradation policy in 1995. Under the water quality standards Camas Creek is a B-1 waterbody. MDOT will need to address how they intend to maintain the criteria and water quality for B-1 streams. The CSKT have authority for Section 401 Certification under the Clean Water Act. Tribal 401 Certification should be included under permits required.

Wetlands. In 1993 the Montana Department of Transportation and Confederated Salish and Kootenia Tribes entered into a memorandum of understanding for mitigation of unavoidable impacts to wetlands by highway construction. The MOU should be included in the discussion under Wetland Avoidance. The functions of the unavoidably impacted wetlands should also be assessed and reported as well as any cumulative impacts.

ALCO Permit. The Shoreline Protection office has identified concerns with the proximity of the highway to Camas Creek between Station 80 and Station 81. Flows of 3200cfs during 1988 resulted in the failure of culverts placed by MDOT. An assessment of the potential for culvert failure during flood events should be included.

Weed Management. In 1993 the Tribes adopted an Integrated Noxious Weed Management Plan. MDOT will need to coordinate their seeding provision with the Tribal plan to ensure compatability.

Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Karl M. Helvik, P.E., Supervisor
Environmental Engineering Section

From: Cora G. Helm
Hazardous Waste Section

Date: February 5, 1996

Subject: NO NEED FOR NOISE ANALYSIS
Perma Canyon-N
RS 382-1(5)4
CN 2026

The proposed highway project is not a Type I project -- there will be no significant changes in the horizontal or vertical alignment, no additional through traffic lanes, nor does it involve construction of a highway on a new location -- therefore, there is no need for a noise analysis (23 CFR Part 772.5(h) and 772.7(a)).

CGH:env

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

MASTER FILE COPY

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MAY 08 1996
ENVIRONMENTAL

MAY 1 - 1996

April 24, 1996

Paul Putz
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

CONCUR
MONTANA SHPO
DATE 2 May 96 SIGNED Jon J. Axline

Subject: RS 382-1(5)4
Perma Canyon - North
Control No. 2026

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Enclosed is the site form for the Coppedge Gulch Bridge (24SA403) for your files. The bridge is located within the above project area. We have no record of this bridge in our files. Because Montana Secondary Highway 382 was added to the FAP system relatively recently, this bridge has not been assigned an MDT identification number or been inspected by the Department. It is my guess, that since it is located on the Flathead Reservation, that is was likely designed and built under the auspices of the Bureau of Indian Affairs. No matter, the bridge is included under the Historic Roads and Bridges Programmatic Agreement and no determination of eligibility is necessary.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosure

cc: Gordon Stockstad, Resources Section
Jeanette Lostracco, Carter-Burgess

Wildlife. The Tribal wildlife program concurs with the findings of the wildlife assessment and recommends placement of wildlife crossing signs at each end of Perma canyon.

If you have any questions regarding these comments please contact Janet Camel, Resource Planning Coordinator, (406) 675-2700 ext. 597.

Sincerely,

CONFEDERATED SALISH AND KOOTENAI TRIBES

Rhonda R. Swaney

Chairwoman, Tribal Council

Paul

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

JUN 13 1996

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RECEIVED
JUN 19 1996
ENVIRONMENTAL

June 10, 1996

CONCUR
MONTANA SHPO
DATE 6-17-96 SIGNED

Paul Putz
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: RS 382-1(5)4
Perma Canyon - North
Control No. 2026

Enclosed is the Determination of Effect for the above project. Based on the proposed plans, we have determined that the project would have **No Effect** to the NRHP-eligible Barth Residence (24SA386) and the School, Gym and Teacherage (24SA392); we request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosure

cc: James Weaver, P.E., Missoula District Administrator
Carl Peil, P.E., Preconstruction Bureau
Joel Marshik, P.E., Environmental Services
Gordon Stockstad, Resources Section
Tony Incashola, Flathead Culture Committee
Patricia Hewankorn, Kootenai Culture Committee

Appendix B - Biological Resource Report

Perma Canyon - North
Biological Resource Report

Executive Summary

The Montana Department of Transportation's Perma Canyon North project proposes to widen 11.4 kilometers (7.1 mi.) of existing Secondary Highway 382 to a finished width of 7.2 meters (23.6 ft.). The final design is also expected to include such safety enhancements as slope flattening and the improvement of clear zones.

The project is not likely to adversely affect the endangered peregrine falcon, the threatened bald eagle, or their associated habitats. Further, the action is considered to have no effect for the remaining threatened and endangered species in this portion of the state. Because of the area's potential foraging opportunities for various birds of prey, biological requirements call for the avoidance and minimization of impacts to Camas Creek wetland and riparian habitats, with raptor-proofing of all utility relocations made part of Perma Canyon North.

Also discussed are the related fisheries concerns for a resident population of Westslope cutthroat within the potentially involved portions of Camas Creek. Aside from this trout species, there are no other sensitive plants or animals of concern likely to be affected by the project. Mention is made, however, of the numerous crossings of bighorn sheep nearer Perma Canyon, as they could relate to construction traffic.

The most substantial biological concern is for the protection of water quality throughout planning and construction, especially for those lands nearest Camas Creek. Reporting of wetlands is addressed in a separate Wetland Finding.

Introduction

The following report discusses the terrestrial and aquatic resources present in the vicinity of Perma Canyon and Camas Prairie Basin. Biological resources are addressed, as are the possible impacts from proposed construction activities. This report is based on a field survey conducted on the 22nd of September 1995, correspondence and consultation with the Natural Resources Department of the Confederated Salish and Kootenai Tribes, federal and state agencies, and a review of pertinent literature.

General Area Description

Perma Canyon, from its juncture with the main Flathead River, thence north through Camas Prairie Basin to the town of Hot Springs, serves to describe the broader area. It is also within the reservation boundaries of the Confederated Salish and Kootenai Tribes.

The overall topography of the canyon is modest in comparison to adjacent ranges within the Lolo National Forest, and more typically arid as well. Its formation, though not directly affected by past glaciations, was nonetheless influenced by the draining of glacial Lake Missoula some 15,000 years ago.

Rural Secondary Highway 382 follows the canyon as does the recently terminated Yellowstone Petroleum Pipeline, until crossing this road at approximately milepost 2. Precipitating this termination was the 1992 discovery of a 10,000 gallon spill which entered Camas Creek some 3.2 km. (2 mi.) west of milepost 8. Though not a concern for this specific project, this event tragically contaminated roughly 6.4 km (4 mi.) of creek and associated habitats. (Jackson, pers. comm.).

Residential development throughout the canyon and basin is very minimal as evidenced by the few scattered farms committed to irrigated and dryland haying/grazing practices. Canyon areas west of the road are tribally managed as a Rocky Mountain bighorn sheep conservation area; a similar conservation area exists for Rocky Mountain elk east of Highway 382. Lastly, no 6(f) lands are known to be located within the vicinity of this project
(McDonald, pers. comm.).

Project Description

Situated within Sanders County, the proposed project begins within the canyon at milepost 3.9 and extends northerly for 11.4 kilometers (7.1 mi.) to milepost 11.0. The project area is comprised of both lightly timbered/shrubby canyon terrain and the more open topography of Camas Prairie Basin. Classified by MDT as a major collector, this section of two-lane highway briefly approaches Camas Creek early in the project where recommended widening could possibly involve adjacent wetlands.

The stated purpose of the project is to develop a paved width of 7.2 m. (23.6 ft.), as opposed to the existing 6 m. (20 ft.) top, through bituminous overlay and minor widening. There are no major deviations from the existing alignment. Enhancement to overall safety is expected to be accomplished by minor slope flattening and

vegetation removal within the clear zones. The various mailbox turn-outs and approaches are to be paved, with existing stockpasses perpetuated as necessary.

The project will require the acquisition of new right-of-way in addition to telephone and electrical utilities relocation in many areas. No prime or unique land/aquatic resources should be affected by this action.

Study Methods

Agency Consultation and Literature Review

Information pertaining to endangered, threatened, sensitive and rare wildlife, fish, herptiles, and vegetative species was sought from the Confederated Salish and Kootenai Tribes (CSKT), U.S. Fish and Wildlife Service (USFWS), Montana Department of Fish, Wildlife, and Parks (MDFWP), and the Montana Natural Heritage Program (MNHP). A literature review was conducted and the Montana Rivers Information System (MDFWP 1993) queried to gather biological resource data for Camas Creek.

Field Survey

A field survey was conducted on September 22nd, 1995 by both walking and driving the 11.4 kilometer (7.1 mi.) route. Vegetation communities, wetlands, wildlife, and possible fisheries resources, as well as habitat utilization were evaluated.

Study Results

Resource Classifications

The following section describes the various biological resources just mentioned and assesses the possible impacts that may occur as a result of the proposed project. Rare and sensitive species as listed by the Montana Natural Heritage Program and the Montana Department of Fish, Wildlife, and Parks are addressed. Those species monitored by the U.S. Fish and Wildlife Service and listed as endangered or threatened under the Endangered Species Act are considered separately within this report.

Biological Resources

Vegetation

The transition from dry, brushy foothills to arid, prairie basin typifies the immediate project area. Portions nearer the canyon are steep, shaled, and commonly vegetated with such species as serviceberry, snowberry, spotted knapweed, and various native bunchgrasses. The riparian cover along Camas Creek lends the greater plant diversity with the presence of black hawthorn, serviceberry, woods rose, snowberry, big-leafed sage, occasional willow, and two noxious weeds- spotted knapweed and Canada thistle. Wetland species common to the creek are hardstem bulrush, broad-leaved cattail, pondweed, beaked sedge, redtop bentgrass, and wet-site bluegrasses. Sagebrush communities mixed with Sandberg's bluegrass and crested wheatgrass are more common to the broad expanses of the basin where skirting existing agriculture. Right-of-way areas are typically vegetated in noxious weeds and the introduced smooth bromes and bunchgrasses of earlier stabilization efforts. As is common in more arid climates, the most significant vegetative communities are associated with the creek.

Sensitive Species of Concern. A review of the Montana Natural Heritage Program's elemental occurrence listings reveals no known sensitive plant communities within the immediate project area. However, approximately 1.6 km. (1 mi.) beyond the project's northern terminus exists a community of dwarf woolly-heads. Accordingly, avoidance of any dry, vernal pools- the preferred habitat- along Highway 382 is recommended. Two additional sensitive species further removed from the project, yet south of Hot Springs, are slender hareleaf and the white-margined knot-weed; their communities distant enough to preclude impacts from Perma Canyon North.

Wildlife

Perma Canyon and Camas Prairie Basin host a diverse array of wildlife, though perhaps not as diverse or densely populated as more lush habitats within the Flathead River corridor. For example, some furbearers such as fisher, pine marten, mink, and river otter are very uncommon or absent. Beaver, however, do occur within Camas Creek.

Mentioned earlier were the surrounding tribal management areas for elk and bighorn sheep. White-tailed and mule deer are also common to the area, as is the occasional moose.

The list of large carnivores includes mountain lion, black bear, bobcat, coyote, and possibly the foxes and lynx. Presence of gray wolf or grizzly bears within the project vicinity is considered to be transitory and quite rare (Shelley, pers. comm.).

A significant population of raptors utilize the general area to include bald eagles, peregrine falcon, and osprey- more commonly along the main river corridor- in addition to the larger buteo hawks, accipiters, and kestrels. Such corvids as ravens, crows, and magpies are also present. Much like raptors and the occasional waterfowl, neotropical (song) birds are another of the more visible user groups, particularly within the riparian areas of the canyon.

Upland gamebirds, such as mountain grouse, are not especially abundant to the area, however tribal study and consideration is currently being given to the reintroduction of the Columbian race of sharp-tailed grouse within the basin (Flath, pers. comm.).

This survey, having been conducted in late September, precluded sightings of amphibians and reptiles, though several species are known to occur in the project area. Their association with habitats largely removed from the roadway should negate the possibility for significant impacts; consultation with the various agencies did not suggest any specific herptile involvement or conflict within the highway corridor.

Construction activities adjacent to Camas Creek have the potential to impact all aquatic dependent populations through the degradation of water quality. These, however, can be mitigated by the use of appropriate construction practices.

The paucity of functional habitats immediately along the existing highway already reduces the potential for significant wildlife impacts. This is due in part to the limited presence of brushy cover within the ROW, which can often be an attractant to many users such as songbirds and deer. MDT's intention in improving these clear zones is to reduce this attraction for wildlife while increasing the sight distance for motorists. Minor loss of brushy cover and the short term displacement of various songbirds and small rodent-like mammals will result from highway widening and improvement of clear zones.

One such species, the western bluebird, may suffer undue impacts with improvement of clear zones unless its artificial nest boxes located along existing ROW fencing are perpetuated. Since depressed bluebird populations are benefiting from these nesting box programs throughout this portion of the state, it is strongly recommended that the existing boxes in the vicinity of milepost 4 be shifted to newly constructed ROW fencing.

Another biological concern is for the numerous crossings of bighorn sheep within Perma Canyon as they could possibly relate to future construction traffic. On the day of survey, a young bighorn ram was observed to bolt in front of a motorist near milepost 2.5. The resigning of this crossing area for bighorn sheep is recommended, if at all possible.

Sensitive Species of Concern

Following a review of the various sensitive species listings and consultation with tribal and state wildlife biologists, there appear to be no sensitive wildlife species threatened by the proposed action. The project area could possibly host the Townsend's big-eared bat and the LeConte's sparrow, however no documentation exists for their presence (Flath, pers. comm.). In light of the available information and project scope, no special restrictions are being requested for sensitive wildlife species during the period of construction.

Fisheries

A tributary of the Flathead River, Camas Creek is a perennial stream paralleling Highway 382 throughout much of the canyon. Within the project area, the creek displays its closest association to highway along the first kilometer, beginning at milepost 3.9. At the time of survey, this portion of creek was experiencing intermittency, with hardstem bulrush and broad-leaved cattail communities separating the pooled areas. The greater potential for stream involvement appears to be at stations 240 to 243-Left and 263+70-Left (Redmond, pers. comm.).

In spite of the limited flows and atypical appearance, the creek still supports a resident population of Westslope cutthroat trout, presently a sensitive species of concern within the state. This indigenous population persists primarily within the lower reaches of Perma Canyon; however, it will typically travel upstream during spring runoff to access reaches within the project area. Eventually, these same fish are believed to attempt a return to the lower portions of Camas Creek. Those that do not do so, remain as temporarily isolated populations until the next high water event. Adults within the population are generally less than 15 centimeters (6 in.) in length (Dos Santos, pers. comm.).

The hydrology of Camas Creek has been largely affected by the activities of beaver within the past several decades. Favored by the decline in fur trapping, beaver numbers have slowly increased along the drainage where sustained by quaking aspen

communities. Their dams are likely promoting area wetlands as well as influencing fish habitat and passage.

Due to the significance of this sensitive species and the macro-invertebrates within the system upon which it depends, avoidance and minimization of impacts to Camas Creek are recommended for both the design and construction phases of this project. It is for these same reasons that protection of water quality again becomes imperative. MDT recognizes these concerns in stating their intent to avoid and minimize impacts where possible early within the project design (Foy, pers. comm.).

Threatened and Endangered Species

Eleven species within Montana have been classified by USFWS as either threatened or endangered. Under Section 7 of the Endangered Species Act (ESA), as amended, activities conducted, sponsored, or funded by federal agencies must be reviewed for their effects upon species federally listed or proposed for listing as threatened or endangered. The endangered species are the gray wolf, peregrine falcon, whooping crane, black-footed ferret, pallid sturgeon, white sturgeon, and Interior least tern. The continental populations of grizzly bear, bald eagle, piping plover, and a sole plant species, the water howellia, are listed as threatened.

Of these species, the Interior least tern, black-footed ferret, whooping crane, piping plover, and water howellia are not considered to be endemic to the project area. Two additional species, the gray wolf and grizzly bear, are generally considered to occur with such extreme infrequency in the project area that they are also precluded from any anticipated impacts (Becker, pers. comm.). Under these premises, and following personal communications and literature review, it is determined that implementation of the proposed action will have no effect on any of these seven species. The remaining two in need of consideration are the threatened bald eagle and the endangered peregrine falcon.

Bald Eagle

Analysis. Bald eagles occur in the general area as migrants, winter residents, and in one known instance as a nesting pair some 6.4 km. (4 mi.) southeast of milepost 3.9. Although their presence is largely associated with the Flathead River and its floodplains, the birds can be expected to forage within the immediate project area; roadkills and natural carrion, as well as the wetlands of Camas Creek, are a likely attractant to various birds of prey. There are no habitat features such as loafing or

perch sites within the project area, as are found along the Flathead, to concentrate bird numbers.

Mitigation/Coordination Measures. In that the year-round presence of bald eagles within the project's vicinity is recognized, yet given the nature of their use within the immediate project area, the following measure is required to ensure that impacts are minimized:

- All powerline relocations shall be constructed and raptor-proofed in accordance with Raptor Research Report No. 4 (Raptor Research Foundation, 1981).

This measure would also benefit many raptors not protected by the ESA, most notably the larger buteo hawks. Raptor-proofing is a policy currently being applied by the Montana Department of Transportation.

Though vehicle-killed deer and mountain sheep do not appear to be a problem in the area, their removal from the highway would further reduce this imperilment for both eagles and hawks.

Determination of Effects. Based on the above, it is determined that implementation of the proposed action is not likely to adversely affect the bald eagle.

Peregrine Falcon

Analysis. Though nearly extirpated, the peregrine falcon continues to be a traditional resident of the Intermountain West, as recovery programs begun in the 1970's determinedly restore the bird over much of its range. One such program happens to be in its second year in the Clear Creek drainage several miles south and west of the highway project (Ball, pers. comm.). Peregrine use of the overall area, aside from activity surrounding this hack site, is still likely to be transitory with foragings probable among wetland and riparian habitats.

Possible nesting territories for peregrines have been occasionally rumored for nearer locations along the Flathead River, though none are presently documented. This may be partially explained by the possibility of adult pairs attempting to establish nesting territories, perhaps without success.

Mitigation/Coordination Measures. Because of utility relocations and the need to preserve area wetlands and riparian covers essential to the success of the Clear Creek

hacking program, the following measures are required to ensure that impacts are minimized:

- Any necessary powerline relocations shall be constructed and raptor-proofed in accordance with Raptor Research Report No. 4 (Raptor Research Foundation, 1981).

- Avoidance and minimization of the wetland and riparian areas associated with Camas Creek should be effected wherever possible.

- It is recommended that "wildlife crossing" signs be placed at each end of Perma Canyon.

Determination of Effects. Based on the above, it is determined that implementation of the proposed action is not likely to adversely affect the peregrine falcon.

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Referenced Species

Common Name	Genus and Species
Fauna	
Bald eagle	*Haliaeetus leucocephalus*
Beaver	*Castor canadensis*
Black bear	*Ursus americanus*
Black-billed magpie	*Pica pica*
Black-footed ferret	*Mustela nigripes*
Bobcat	*Lynx rufus*
Columbian sharp-tailed grouse	*Tympanuchus phasianellus col.*
Common crow	*Corvis brachrhynchos*
Common raven	*Corvis corax*
Coyote	*Canis latrans*
Fisher	*Martes pennanti*
Gray wolf	*Canis lupis*
Grizzly bear	*Ursus arctos horribilis*
Interior least tern	*Sterna albifrons*
Lynx	*Lynx canadensis*
Mountain lion	*Felis concolor*
Mule deer	*Odocoileus hemionus*
Osprey	*Pandion haliaetus*
Peregrine falcon	*Falco peregrinus*
Pine marten	*Martes americana*
Piping plover	*Charadrius melodus*
Rocky Mountain bighorn sheep	*Ovis canadensis*
Rocky Mountain elk	*Cervus elaphus*
Townsend's big-eared bat	*Plectotus townsendii*
Western bluebird	*Sialia mexicana*
White-tailed deer	*Odocoileus virginianus*
Whooping crane	*Grus americana*
Westslope cutthroat trout	*Salmo clarkii*

Common Name	Genus and Species
Flora	
Beaked sedge	*Carex rostrata*
Big-leafed sagebrush	*Artemisia tridentata*
Black hawthorn	*Crataegus douglasii*
Bluebunch wheatgrass	*Agropyron spicatum*
Bluegrass sp.	*Poa sp.*
Broad-leaved cattail	*Typha latifolia*
Canada thistle	*Cirsium arvense*
Crested wheatgrass	*Agropyron cristatum*
Dwarf woolly-heads	*Psilocarphus brevissimus*
Hardstem bulrush	*Scirpus acutus*
Pondweed sp.	*Potamogeton sp.*
Redtop bentgrass	*Agrostis alba*
Sandberg's bluegrass	*Poa sandbergii*
Serviceberry	*Amalanchier alnifolia*
Slender hareleaf	*Lagophylla ramosissima*
Smooth brome	*Bromus inermis*
Snowberry	*Symphoricarpos albus*
Spotted knapweed	*Centaurus maculosa*
Wheatgrass sp.	*Agropyron sp.*
White-margined knotweed	*Polygonum polygaloides*
Willow sp.	*Salix sp.*
Woods rose	*Rosa woodsii*

Appendix B.1 - Wetland Finding

Perma Canyon - North
Wetland Finding

Introduction

This wetland finding was prepared for the proposed improvements to Highway 382, known as the Perma Canyon North project. Wetland delineations were conducted in accordance with the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual (COE 1987). The USGS 7.5 minute quadrangles including Camas Prairie and Markle Pass Montana were used for general information related to the project area and its surroundings. Site specific reconnaissance, including aerials and as-built drawings of the site portraying the topography, existing road centerlines, and specific roadway elements was provided by Montana Department of Transportation (MDT). Figure 3 is a vicinity map showing the general locations of wetlands. Approximate boundaries (not surveyed limits) of wetlands are outlined on the as-built drawings included in Appendix B.2.

The following description is the result of field work conducted at the Perma Canyon North project area on October 9th 1995. The goal of this field investigation was to collect soil, vegetation and hydrologic data to map the location of the wetland / non-wetland areas within any potential disturbance area, and thus provide a complete three parameter delineation. All wetlands within the existing right-of-way were delineated and mapped. Where pertinent, additional information and comments regarding the conditions immediately outside the right-of-way are included to provide a more complete description of the entire hydrologic system.

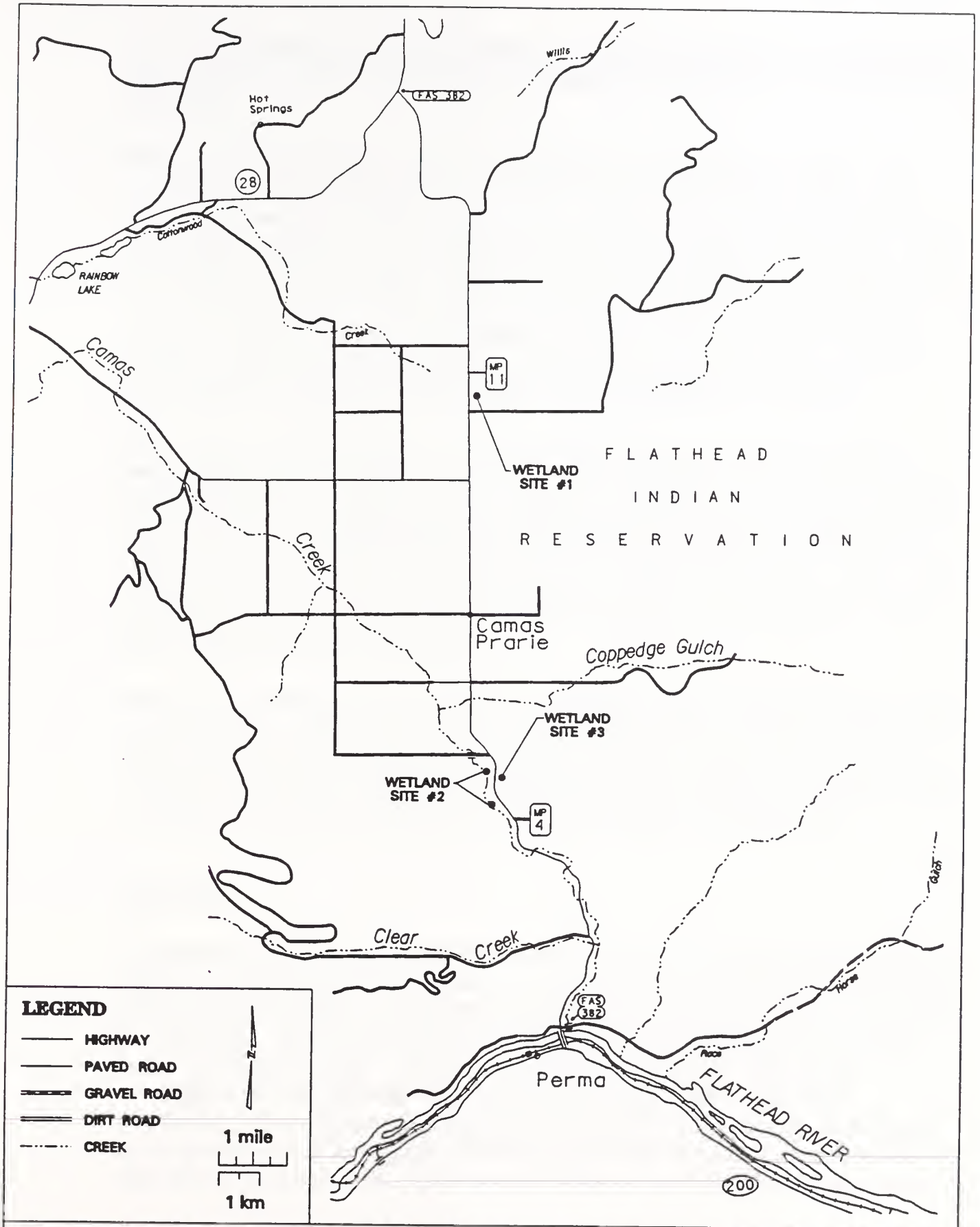
Site Description

Location

The project area is contained within a linear corridor approximately 24.4 meters (80 feet) wide by 11.5 kilometers (7.1 miles) long beginning at an elevation of approximately 793 meters (2,600 feet) and ending at an approximate elevation of 861 meters (2825 feet). The project area is located 6.3 kilometers (3.9 miles) north of Highway 200 along Highway 382 within Camas Creek Basin in Sanders County, Montana on the Flathead Reservation.

Geomorphology

The topography and geomorphic features surrounding the project area are the result of past glaciation and current water erosion. Broad U-shaped valleys, basins and gorges



Perma Canyon – North

WETLAND LOCATIONS
Figure 3

are relics of glaciation. The gently rolling hills located at the north end of project are giant ripples created by water from Glacial Lake Missoula flowing over Markle Pass to the north.

The project area traverses two distinctly different geomorphologic settings. The southern end of the existing road travels north from Montana 200 through a gorge created by Camas Creek. This gorge, cut into a small ridge of shale that divides the Flathead River Valley to the south from the Camas Prairie Basin to the north. Thus, the southern end of the project travels through a steeply sloping narrow canyon with recent alluvium collected in the bottom of the valley. Camas Creek at this location is a 2.4 to 3.6 meters (8 to 12 foot) wide channel carried in a deeply cut and currently eroding arroyo. For most of its course at this location the flow line of the creek is 1.5 to 3.0 meters (5 to 10 feet) below the highly erosive perpendicular cutbanks.

The northern 8 kilometers (5 miles) of the project is located on an open montane basin. This basin is completely contained with no other hydrological inlets. Surface flow within the basin is ephemeral and concentrates in sinuous rivulets that eventually join Camas Creek. Enough ground and surface water concentrates at Camas Creek that it becomes a perennial stream just above the entrance to the gorge. Camas Creek is listed on the Camas Prairie USGS quadrangle as a perennial watercourse in the southern half of Camas Prairie Basin through the gorge and ephemeral in the northern half. This was verified in the field.

In both of the settings the road occupies a relatively low place in the landscape roughly parallel to Camas Creek. The existing road is roughly parallel to the flow of rivulets and Camas Creek. Although the surrounding area is arid to semi-arid, receiving only 35.5 cm to 46 cm (14 to 18 inches) of precipitation annually, portions of the study area are situated to receive or conduct any of the moisture that eventually falls.

Vegetation

The general upland vegetation along the Perma Canyon North project area is typical of disturbed roadside vegetation. Within the right-of-way and invading into the adjacent fields are species typical of revegetation activities and invaders that come in as a result of disturbance. Species such as Western Wheatgrass *(Agropyron smithii)* and Thick-Spike Wheatgrass *(Agropyron dasystachyum)*, Spotted Knapweed *(Centaurea maculosa)*, Cheatgrass *(Bromus tectorum)*, Clasping Pepper Grass *(Lepidium perfoliatum)*, Smooth Brome *(Bromus inermis)* and Bull thistle *(Cirsium vulgare)* make up the greater part of the vegetative cover within the right-of-way. Adjacent to the right-of-way are mixed fields. Some of these fields are currently in cultivation, some

have been cultivated and are laying fallow and some are still natural stands of Big Sagebrush *(Artemesia tridentata)*.

Wetland vegetation within the project area is a mix of distributions that range from natural plant associations to 100% monocultures of planted species. Wetland #1 at the extreme north end of the project is vegetated by a swath of Canary Reed Grass *(Phalaris arundinacea)* that covers the flat bottom of the roadside "borrow ditch". The toe of slope of the road fill and the grade change marking the undisturbed area of the adjacent field create a very specific vegetation break on both sides of the Reed Canary Grass *(Phalaris arundinacea)* culture.

Farther south along the Camas Creek wetland (sample sites #2 and #4), the vegetation is a much broader mix of OBL and FACW species. Although Camas Creek is a wetland along its length through the canyon parallel to the roadway, some portions are vegetated in a more naturally undisturbed fashion. Most of the wetland is 1.5 to 2.4 meters (5 to 8 feet) below its adjacent grade and only Cattails *(Typha latifolia)* can be readily seen from the road. Close inspection also revealed Softstem Bulrush *(Scirpus validus)*, Sedges *(Carex sp.)* occasional Willows *(Salix sp.)* and, on the slightly higher ground, Quaking Aspen *(Populus tremuloides)*.

Finally, wetland sample site #3 is not inundated or saturated year around and is vegetated primarily by Quaking Aspen *(Populus tremuloides)* and Hawthorn *(Crataegus douglasii)*.

Soils

Information relating to soils was provided by the USDA Natural Resource Conservation Service, Plains, Montana Field Office. The soils located within the study area are generally silt loams or gravelly loams depending on the location. These soils were derived from either lacustrine and/or alluvial deposits reworked and deposited by recent glaciation.

Sample sites were taken within the mapped boundaries of the following 2 map units:

Map Symbol	Map Unit Name	Drainage Class
251A	Horseplains Fine Sandy Loam, Gravelly Substratum 0 to 2% slopes Occasionally Flooded	Somewhat Excessively Drained
56A	Bowlake Gravelly Loam, 0 to 2% slopes	Well Drained

At most of the sample pit locations the map unit was confirmed within some variations of texture and color. Some of the upland sample pits were dug near, or on, the side slopes of the road fill. In these situations it was difficult to determine whether or not it was the confirmed map unit due to the fact that the map units in these areas are potentially gravelly lower in their profile.

Hydrology

Wetlands along this project were grouped into three specific categories based on the interpreted origin of their hydrology, These three categories are as follows:

Hydrologic Source	Sample Sites Included	Wetland Type	MDT Rating
Borrow Ditch	#1	Freshwater Emergent	IV
Camas Creek	#2, #4	Freshwater Emergent/Riparian	II
Forested Channel (East Side)	#3	Forested Riparian	III

Borrow Ditch (Milepost 10.3 to 10.6)

The hydrology for this wetland at the north end of the project is supplied by natural precipitation surface runoff that is channeled by means of twin culverts and grading to a relatively flat borrow ditch extending approximately 320 meters (1,050 feet) from Big Gulch Road to the north end of the project. The ditch is approximately 4.5 meters (15 feet) wide and an average of 3.4 meters (11 feet) from the edge of the existing road. The water from runoff ends up here and without any observed outlet must percolate through to the existing water table.

Camas Creek (Milepost 4.0 to 4.7)

Camas Creek flows south out of Camas Creek Basin and is the concentration point for the entire basin. Upstream toward the middle of the basin, the stream is too ephemeral to support wetland growth but down in the steeper sections of the canyon, where it comes close to the study area, it has a small perennial flow. The flow moves through a highly braided flat streambed of soil substrate, actively cutting down and back and forth across the valley. The emergent vegetation crowds the channel from wall to wall throughout most of this length with slightly drier species rooting in the braided islands. It appears to be inundated or saturated permanently.

Forested Channel (East Side) (Milepost 4.4 to 4.5)

On the east side of the existing alignment, as it passes through the steeper portions of the canyon, a natural channel appears immediately adjacent to the right-of-way. This channel seems to have been interrupted and graded over inside the right-of-way under the original or subsequent construction. This discontinuous channel receives surface runoff from the surrounding hillsides. The channel is approximately 3 meters (10 feet) wide by 122 meters (400 feet) long and empties back out into a sheet surface flow inside the right-of-way and then disappears. The area is temporarily flooded during portions of the growing season as a result of precipitation events.

Wetland Functions Impacted

General. The impacted functions of wetlands within the Perma Canyon-North project are generally limited and not significant. This is in part due to the nature of the wetlands affected and in the character of the design. There are no places where the expected design entails breaching or crossing the wetland/riparian corridor(s). This eliminates the possibility of compromising the viability of the corridor as habitat and for flood storage or conveyance. Since the corridor will remain generally intact, the impacts are evaluated on the percentage of the wetland which may be taken and whether or not the portion taken significantly differs from the entire wetland. For example, taking the only canopied area from a wetland may cause greater impacts even if the areal extent is small. This is not the case with any impacts in the Perma Canyon-North project.

Specific Impacts

Site #1. Functions impacted at Wetland Site #1 are negligible. This incidental wetland has an overall MDT rating of IV. Even though it is likely that 100% of the wetland may be impacted, the functions removed are not significant. This is a monoculture of grasses that provides little or no habitat value, minimal species diversity, and very little of a number of other characteristics. It is not unique and provides no recreation or educational potential.

Sites #2 and #4. Functions impacted at Wetland Site #2 and #4 are low to moderate. Although this is an important wetland with an MDT ranking of II, the small extent of impact reduces the overall removal of functions. This is further mitigated by the fact that where the impact would take place at site #2, the wetland disturbed is of lesser value than other areas of the wetland. At this location, the stream course is braided

and is still upstream of the deep arroyo contained portion. One of the branches of the stream flows in and out under the right-of-way fence. The vegetation and habitat where it flows out is more disturbed and of less value than the other channels. Evidence of grazing tracks as well as the haphazard distribution of plants and proximity to the roadway reduces the functions at this point. The area of impact is only a very small percent of the overall wetland.

Site #3. Functions impacted at Wetland Site #3 are also low. This is the only wetland area in the project with a heavy canopy. This wetland, while valuable, is again only impacted slightly with regard to functions. This is due to the impacts occurring at the lower end of the wetland where there is less habitat value and little tree canopy. Where these impacts take place, the wetland has flowed out into the borrow ditch and is another monoculture of Reed Canary Grass (Phalaris arundinacea). It is likely that only this area will be impacted and little or no trees will be removed. The impacts to functions are then reduced.

Proposed Action

The proposed project will include an overlay, minor widening and slope-flattening. No horizontal or vertical realignments are proposed.

Wetland Avoidance

A recommendation will be made to the MDT to avoid these areas in their design wherever possible, especially in regard to the Camas Creek areas. Unavoidable impacts to wetlands will take into consideration the memorandum of understanding between MDT and CSKT specifically written to address impacts due to highway construction.

Conclusion

Wetlands associated with Camas Creek are of fairly high quality and provide habitat in a rather arid setting. These wetlands are also the closest to the existing right-of-way and even enter the existing right-of-way for a short distance. The steep sided arroyo like conditions of Camas Creek, restricts the wetlands to a very specific edge where it parallels the existing alignment through the canyon. This distinct edge follows the right-of-way fence varying from 0.3 or 0.6 meters (1 or 2 feet), to 3 or 3.7 meters (10 or 12 feet) outside and west of the right-of-way

The entire 11.5 kilometer (7.1 miles) of the project was walked or driven investigators looking for hydrologic and/or wetland vegetative cues. All topographical low sites such as stock crossings were investigated. In those areas that met the vegetative and hydrologic criteria, soil samples were taken and Routine Wetland Determination Forms filled out. MDT wetland site evaluation forms were filled out for each of the three distinct wetlands identified in the hydrology section. Once a wetland determination was made the boundaries were measured and mapped in relation to the centerline of the existing roadway. These measured sketches were recopied and areas of impacts were calculated. As a result, 0.24 hectares (0.59 acres) of wetlands were determined to be impacted due to proposed improvements. Temporary impacts to approximately 800 square meters (2,880 square feet) of wetlands will also occur due to project construction activities.

No cumulative impacts to wetlands are expected due to the distance of other MDT projects from this proposed project.

Refer to Preliminary Plans in Appendix B.2 for approximate boundaries of wetlands impacted. Appendix B.3 contains the U.S. Army Corps of Engineers Wetland Delineation Forms and MDT Wetland Site Evaluation Forms.

Mitigation

No potential wetland mitigation sites were identified in the area adjacent to Secondary Highway 382. It is proposed that mitigation for this project be combined with a mitigation site constructed for another MDT project on the Flathead Reservation.

Plant List

River Hawthorn	*Crateagus douglasii*
Columbia Hawthorn	*Crateagus columbiana*
Wood's Rose	*Rosa woodsii*
Toad Rush	*Juncus bufonius*
Spotted Knapweed	*Centaurea maculosa*
Clasping Pepper Grass	*Lepidium perfoliatum*
Kentucky Bluegrass	*Poa pratensis*
Western Wheatgrass	*Agropyron smithii*
Reed Canary Grass	*Phalaris arundinacea*
Softstem Bulrush	*Scirpus validus*
Quacking Aspen	*Populus tremuloides*
Black Cottonwood	*Populus trichocarpa*
Smooth Scouring Rush	*Equisetum laevigatum*
Needle Spike Rush	*Eleocharis acicularis*
Beaked Sedge	*Carex rostrata*
Common Mullein	*Verbascum thapsus*
Cheat Grass	*Bromus tectorum*
Big Sagebrush	*Artemisia tridentata*
Smooth Brome	*Bromus inermis*
Bull Thistle	*Cirsium vulgare*
Wheat	*Triticum aestivum*

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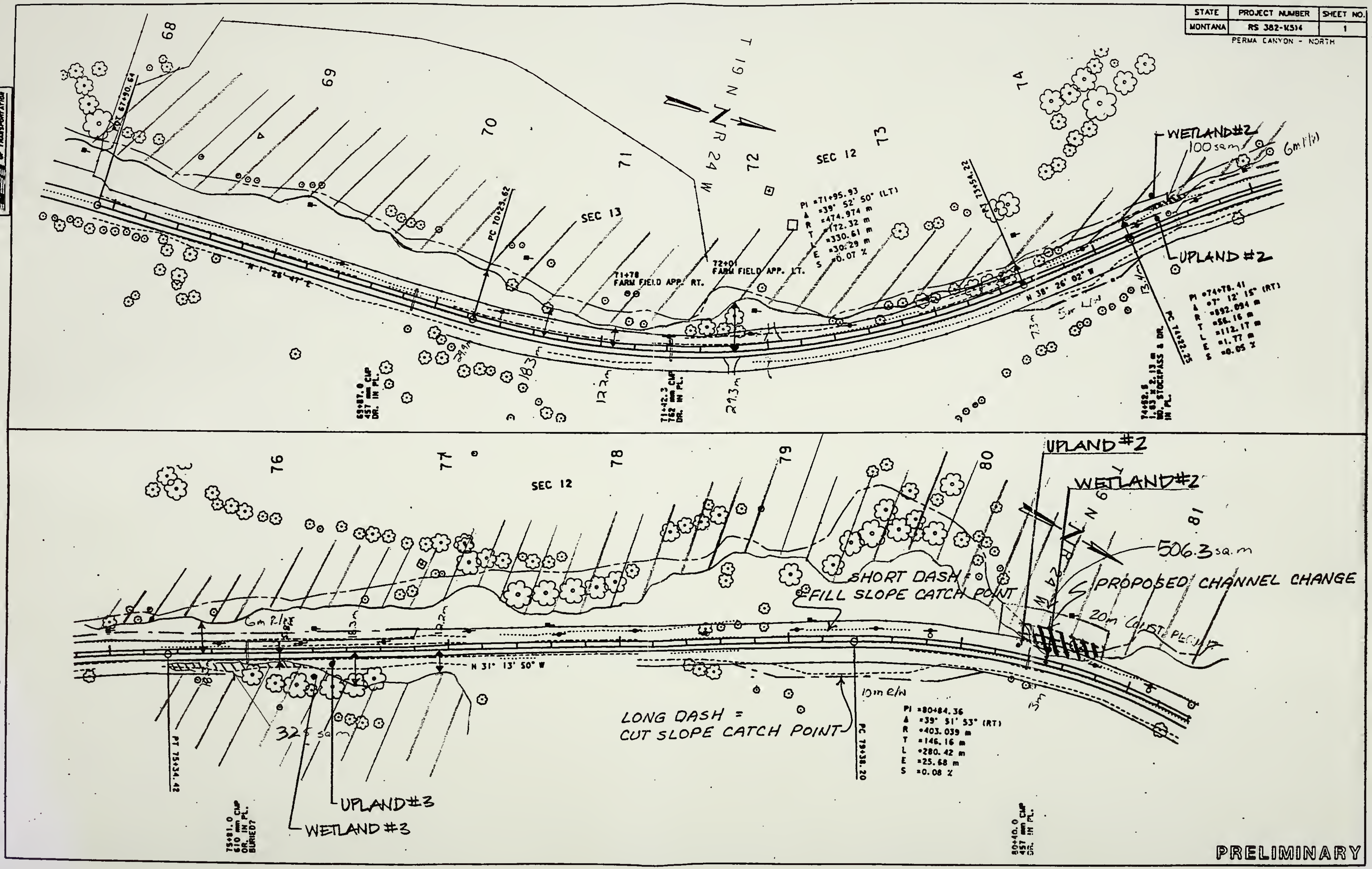
Appendix B.2 - Approximate Wetland Boundaries on Preliminary Plan

R/W ESTIMATE 6/13/96

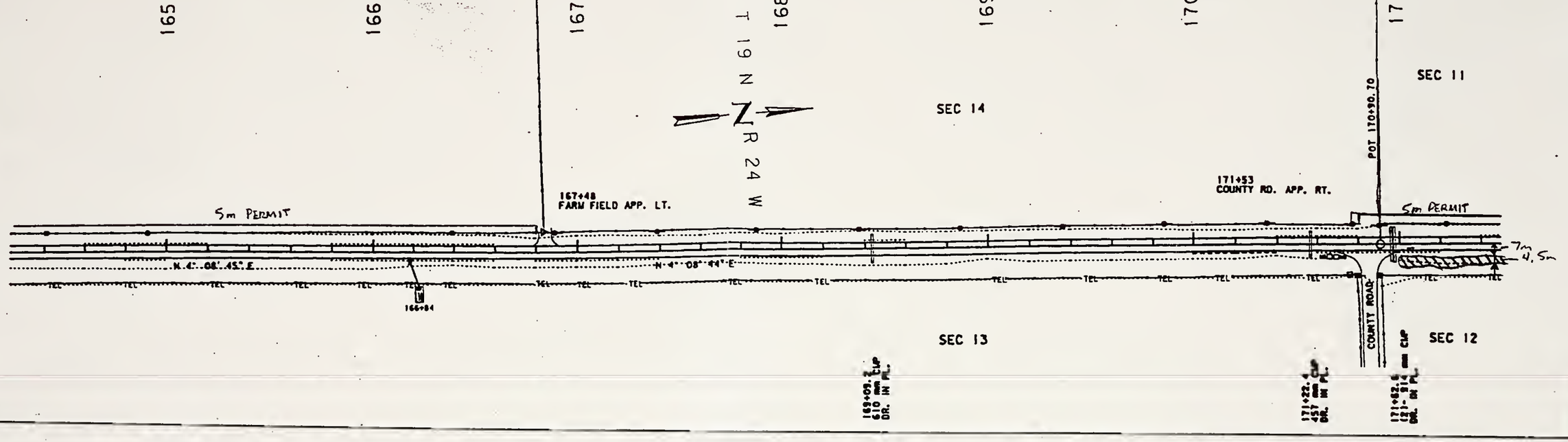
FILE: PERMA

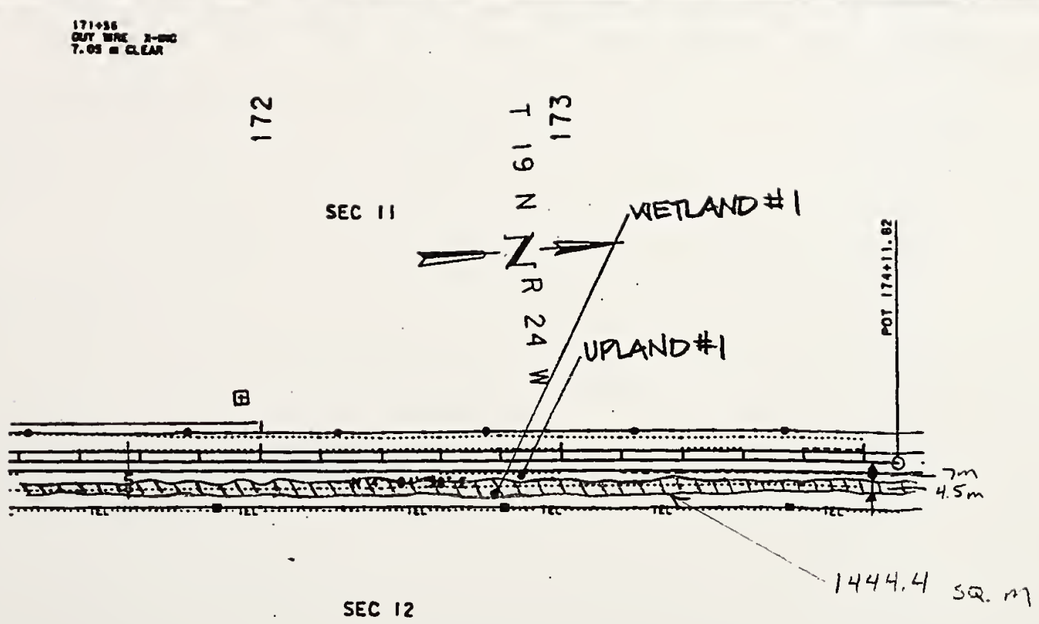


STATE	PROJECT NUMBER	SHEET NO.
MONTANA	RS 382-(514	8

PERMA CANYON - NORTH

MONTANA DEPARTMENT OF TRANSPORTATION





MONTANA CADD

PRELIMINARY

Appendix B.3 - COE Routine Wetland Delineation Forms and MDT Wetland Site Evaluation Forms

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA- UPLAND #1B	Date: 10-9-95
Applicant/Owner: MDT	County: SANDERS
Investigator: REDMOND/KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: DRY #1
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. POA PRATENSIS	H	FACU+	9.		
2. AGROPYRON SMITHII	H	FACU	10.		
3. AGROPYRON DASYSTACHYUM	H	FACU-	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). < 50%

Remarks: ROADSIDE DISTURBED MIX

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

✓ No Recorded Data Available

Field Observations:

Depth of Surface Water:	N/A	(in.)
Depth to Free Water in Pit:	>18	(in.)
Depth to Saturated Soil:	>18	(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: NO INDICATORS

SOILS

Map Unit Name (Series and Phase): (56A) BOWLAKE GRAVELLY LOAM 0-2% Drainage Class: WELL DRAINED

Taxonomy (Subgroup): FRIGID CALLIC ARGIXEROLLS Field Observations Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-3					ROAD FILL (GRAVEL)
3-6		7.5YR 5/2			CLAY LOAM
6-14		10 R 6/1			CLAY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: STEADY GRADIENT

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks: SAMPLE POINT TAKEN ON ROADFILL - SIDESLOPE

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA - SAMPLE #1A	Date: 10-7-95
Applicant/Owner: MDT	County: SANDERS
Investigator: REDMOND/KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: WET #1
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. PHALARIS ARUNDINACEA	N	FACW	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks: BOTTOM BORROW DITCH 100% PHALARIS MONOCULTURE (SEE CROSS SECTION)
PHALARIS "COATS" THE FLAT BOTTOM OF THIS DITCH.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
✓ No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
✓ Drift Lines
___ Sediment Deposits
✓ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
✓ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: ALTHOUGH THE ENTIRE BASIN IS SOMEWHAT ARID, A SET OF DOUBLE CULVERTS A SHORT DISTANCE AWAY FILLS THIS BORROW DITCH WITH RUNOFF FROM THE WHOLE BASIN ON THE OTHER SIDE. SOIL WAS NOT SATURATED BUT VERY MOIST.

SOILS

Map Unit Name (Series and Phase): (56A) BOWLAKE GRAVELLY LOAM 0-2% Drainage Class: WELL DRAINED

Taxonomy (Subgroup): FRIGID CALCIC ARGIXEROLLS Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2					ORGANIC MAT
2-8		7.5YR 4/0	7.5YR 5/2	COM. DISTINCT	CLAY LOAM
8-14		7.5YR 4/0	7.5YR 5/2	ABUNDANT DIST	(50/50) CLAY LOAM
14-16		7.5YR 6/2			

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: STEADY COLOR GRADIENT

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Yes) No (Circle)

Remarks: THIS IS A VERY MARGINAL MAN-INDUCED BORROW DITCH WETLAND

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA-UPLAND #2B	Date: 10-7-05
Applicant/Owner: MDT	County: SANDERS
Investigator: PETTINATO / KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: UP #2B
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. EQUISETUM-LAEVIGATUM	H	FACW	9.		
D 2. AGROPYRON SMITHII	H	FACU	10.		
3. POA PRATENSIS	H	FACU+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). < 50%

Remarks:

HYDROLOGY

___ Recorded Data (Describe In Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

✓ No Recorded Data Available

Field Observations:

Depth of Surface Water:	N/A	(in.)
Depth to Free Water in Pit:	>18	(in.)
Depth to Saturated Soil:	>18	(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: NO PRIMARY OR SECONDARY INDICATORS. SAMPLE SITE ON ROAD FILL SIDE SLOPE

SOILS

Map Unit Name (Series and Phase): (251A) GRAVELLY SUBSTRATUM HORSEPLAINS FINE SANDY LOAM

Drainage Class: EXCESSIVELY DRAINED

Taxonomy (Subgroup): FRIGID TYPIC XEROFLUVENTS

Field Observations
Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-1					ORG. MAT
1-14		10YR 5/3			SANDY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: DRY SAMPLE, DIFFICULT DIGGING
GRAVEL ROAD FILL MAY BE INCLUDED (SHALE EXFOLIATING)

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA - WETLAND #2A	Date: 10-7-15
Applicant/Owner: MDT	County: SANDERS
Investigator: RICHARDS/KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: WET #2A
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. CAREX RAMENTACEA	H	OBL	9.		
2. SCIRPUS VALIDUS	H	OBL	10.		
3. ROSA WOODSII	SH	FACU	11.		
4. ELEOCHARIS ACICULARIS	H	OBL	12.		
5. JUNCUS BUFONIUS	H	FACW+	13.		
6. EQUISETUM LAEVIGATUM	H	FACW	14.		
7.			15.		
8.			16.		

D

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). > 50%.

Remarks: 1 LARGE SINGLE WILLOW (SILKY SD.) OUTSIDE R/W
JUNKY VEGETATION NOT WELL DEFINED, VEGETATION ERRATIC BUT WET

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water:	N/A (in.)
Depth to Free Water in Pit:	>18 (in.)
Depth to Saturated Soil:	>18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- X Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channals in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: LACK OF VEG. IN CHANNEL BOTTOM
WATER MARK LEFT ON TREE TRUNK AND STICK HOOKED INTO VEG. INSIDE
CHANNEL NOT FLOWING AT TIME OF SURVEY, BUT APPEARS TO BE FREQUENTLY
INUNDATED FOR MOST OF THE GROWING SEASON

SOILS

Map Unit Name (Series and Phase): (251A) GRAVELLY SUBSTRATUM 0-2% OCCASSIONALLY FLOODED HOBEPLAINS FINE SANDY LOAM
Drainage Class: EXCESSIVELY DRAINED
Taxonomy (Subgroup): FRIGID TYPIC XEROFLUVENTS
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4		10YR 3/2			LOAM (HIGH ORGANIC)
4-8		10YR 5/1	10YR 6/8	COM. DISTINCT	LOAM
8-14		10YR 8/6	10YR 6/8		GRAVEL INCLUDED

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: GRAVEL SIZE 3/4" FAIRLY GOOD MOTTLING

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks: THIS SAMPLE TAKEN IN AN ARROYO JUST UPSTREAM FROM THE CONFLUENCE WITH ANOTHER CHANNEL CURRENTLY INUNDATED. VERY SPECIFIC WATERMARK ON FENCEPOST IN MIDDLE OF CHANNEL.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: DERMA CANYON - UPLAND #3	Date: 10-14-95
Applicant/Owner: MDT	County: SANDERS
Investigator: REDMOND/KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: UPL #3
(If needed, explain on reverse.)	

VEGETATION

D

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. BROMUS INERMIS	H	UPL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). < 50%

Remarks: SAMPLE TAKEN INSIDE ROW

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

✓ ___ No Recorded Data Available

Field Observations:

Depth of Surface Water:	N/A	(in.)
Depth to Free Water in Pit:	>15	(in.)
Depth to Saturated Soil:	7½	(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: NO INDICATORS

SOILS

Map Unit Name (Series and Phase): (251A) HOSEPLAINS FINE SANDY LOAM — Drainage Class: EXCESSIVELY DRAINED

Taxonomy (Subgroup): FRIGID TYPIC XERIFLUVENTS — Field Observations: Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-1/2					ORG MATTER
1/2-4		10YR3/2			LOAM
4-18		10YR5/2			SANDY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: NO MOTTLES, OR COLORS

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA CANYON - WETLAND SAMPLE #3	Date: 10-14-95
Applicant/Owner: MDT	County: SANDERS
Investigator: REDMOND/KEANE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: WET #3
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. CRATAEGUS DOUGLASII	SH	FAC	9.		
2. POPULUS TREMULOIDES	T	FACU	10.		
3. ROSA WOODSII	SH	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

D

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). > 50%

Remarks: TREES ARE 8" TO 10" CALIPER

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

✓ No Recorded Data Available

Field Observations:

Depth of Surface Water:	N/A	(in.)
Depth to Free Water in Pit:	> 18	(in.)
Depth to Saturated Soil:	> 18	(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 Inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Date
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: VERY DISTINCT CHANNEL

SOILS

Map Unit Name (Series and Phase): (251A) HORSEPLAINS FINE SANDY LOAM

Drainage Class: POORLY DRAINED

Taxonomy (Subgroup): FRIGID TYPIC XEROFLUVENTS

Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-1					OF & MT
1-3		10YR 3/1			SANDY LOAM
3-13		10 YR 4/1			SANDY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks: SHRUBBY / FORESTED DECIDUOUS WETLAND
CHANNELIZED

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA CANYON - UPLAND #4	Date: 10-14-95
Applicant/Owner: MDT	County: SANDERS
Investigator: REDMOND/KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: UPL #4
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. BROMUS INERMIS	H	UPL	9.		
2. CIRSIUM VULGARE	H	FACU	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). < 50%

Remarks: DISTURBED, INVADED FROM ROW

HYDROLOGY

___ Recorded Data (Describe In Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

✓ ___ No Recorded Data Available

Field Observations:

Depth of Surface Water:	N/A (in.)
Depth to Free Water in Pit:	>15 (in.)
Depth to Saturated Soil:	>15 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: SINGLE OBSERVATION, NO INDICATORS, +/-5' ABOVE FLOWING WATER

SOILS

Map Unit Name (Series and Phase): (251A) HORSEPLAINS FINE SANDY LOAM

Drainage Class: EXCESSIVELY DRAINED

Taxonomy (Subgroup): ARGID TYPIC XEROFLUVENTS

Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4		10YR3/3			LOAM
4-13		10YR6/3			SANDY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: NO INDICATORS

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes No

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: PERMA CANYON - WETLAND #4	Date: 10-14-95
Applicant/Owner: MDT	County: SANDERS
Investigator: REDMOND/KEENE	State: MT
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: WET #4
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. TYPHA LATIFOLIA	H	OBL	9.		
2. SCIRPUS VALIDUS	H	OBL	10.		
3. CAREX ROSTRATA	H	OBL	11.		
4. POPULUS TREMULOIDES	T	FAC+	12.		
5. SALIX SP.	SH	FACW	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
✓ No Recorded Data Available

Field Observations:

Depth of Surface Water: 1" (in.)

Depth to Free Water in Pit: 0 (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
✓ Inundated
✓ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: BOTTOM OF ARROYO

SOILS

Map Unit Name (Series and Phase): (251A) HORSEPENS FINE SANDY LOAM — Drainage Class: EXCESSIVELY DRAINED

Taxonomy (Subgroup): TYPIC XERIFLUVENTS — Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2					ORG. MAT
2-6		7.5YR 4/0			CLAY LOAM
6-13		7.5YR 3/0	7.5YR 5/6		SANDY CLAY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ✓ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks: WETLANDS ACROSS THE BOTTOM OF AN ARROYO

MDT WETLAND SITE EVALUATION FORM
(Revised June 22, 1994)

Project Name: PERMA CANYON Number: RS 382 - 1 (5) 4

Evaluation Date: 10-14-95 Evaluator(s): REDMOND/KEENE Site Name(s): WETLAND SAMPLE #1

Site Location: MT. 382 NORTH OF PERMA MT.

Estimated Total Wetland Size: < 1 ACRE Estimated Size Within Proposed ROW:

Conditions During Evaluation: PRTLY CLOUDY

Wetland Classification (from MDT Wetland Classification Scheme)

Water Regime (e.g., Permanently flooded)	Wetland Type (e.g., Marsh)	Dominant Species	Modifier (e.g., Impounded) and/or Descriptor	% of Wetland
TEMP. FLOODED	EMERGENT MARSH	PHALARIS ARUNDINACEA	EXCAVATED DITCH	100%

Wetland Type(s) is (are) locally (circle): Rare (Common) Abundant

Brief Descriptive Summary: BORROW DITCH WETLAND

Functions and Values Assessment

1. Wetland Size (All size criteria throughout the assessment refer to the size of the entire wetland.)

Site	Score
> 10 acres	= 10
6 to 10 acres	= 5
1 to 5 acres	= 3
< 1 acre	(= 1)

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	(= 1)
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

2. Habitat Diversity (Function of wetland type diversity and presence of open water component.)

# of Wetland Types (not including open water types)	(1 Multiply 1) Score	Score	Open Water
≥ 3 types	= 5	2 =	Present
2 types	= 3	(1 =)	Absent
≤ 1 type	(= 1)		

Calculated Score =

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	(= 1)
2-3 =	Moderate	= 3
5-6 =	High	= 5
10 =	Except.	= 10

3. Food Chain Support (Function of habitat diversity [HD] and wetland size)

HD Rating (1 #2 above)	(1 Multiply 1) Score	Score	Size
Low	(= 1)	5 =	> 5 acres
Moderate	= 2	3 =	1-5 acres
High	= 3	(1 =)	< 1 acre
Exceptional	= 4		

Calculated Score =

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	(= 1)
3-9 =	Moderate	= 3
10-15 =	High	= 5
20 =	Except.	= 10

4. Habitat for Federally-listed Endangered, Threatened, Proposed, or Candidate (C1 or C2) Species

Wetland Receives:	Score
Regular use by such species or is designated critical habitat	= 10
Occasional use (e.g., infrequent, sporadic use)	= 5
Incidental use (e.g., chance, inconsequential use)	= 3
No known or suspected use	(= 0)

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	(= 0)
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

Habitat for Species Rated "S1", "S2", or "S3" by the Montana Natural Heritage Program (Not including those addressed under #4 above.)

Wetland Provides:	Score
Breeding or other crucial habitat	= 10
Habitat that is used regularly	= 5
Habitat that is used occasionally (e.g., infrequent, sporadic use)	= 3
Habitat that is used incidentally (e.g., chance, inconsequential use)	= 1
No known or suspected habitat	(= 0)

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	(= 0)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

6. General Wildlife & Fish Habitat (Non-T&E)

Criteria I (apply to each group)
- ...tantial or significant use = S
- ...ational or moderate use = M
- Little or no perceived use = L

		Criteria II (apply to entire group)	Score
M	Songbirds	≥ 6 S's or ≥ 8 M's	= 10
L	Raptors	3-5 S's or 6-7 M's	= 5
L	Waterfowl	1-2 S's or 3-5 M's	= 3
L	Marsh & Shorebirds	No S's and ≤ 2 M's	= 1
M	Rodents & Insectivores		
L	Carnivores		
L	Ungulates	Calculated Score = 1	
L	Herptiles		
L	Fish		
L	Invertebrates		

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

7. Flood Control & Storage (Function of floodwater proximity, wetland size, vegetative composition, and flow restriction; Applies only to sites within a discernable floodplain [based on floodwater proximity, flood deposits, FEMA maps, etc.]; If does not apply, Point Value is 0.)

A.

Wetland Size	Score	(1 Multiply 1) Score	Vegetative Composition
> 5 acres	= 5	3 =	> 50% forested or shrub or combination
1-5 acres	= 3	2 =	10-50% forested or shrub or combination
< 1 acre	= 1	1 =	< 10% forested or shrub or combination

B.

Flow Restriction	Score
Outlet restricted or absent	= 2
Outlet unrestricted	= 1

Calculated Score (A + B) = 5

Calcul. Score =	Rating (circle)	Point Val = (circle)
0 =	None	= 0
2-3 =	Low	= 1
4-8 =	Moderate	= 3
10-16 =	High	= 5
17 =	Except.	= 10

8. Sediment Filtration and Water Purification (Function of proximity to potential sediment/pollutant source and emergent vegetative component.)

...elihood to Receive Sediment/Pollutants	Score	(1 Multiply 1) Score	Emergent Vegetative Component
...stantial accumulations evident or likely	= 2	5 =	> 50% emergent
Moderate accumulations evident or likely	= 1	3 =	10-50% emergent
Accumulations not evident and unlikely	= 0.5	1 =	< 10% emergent

Calculated Score = 5

Calcul. Score =	Rating (circle)	Point Val = (circle)
.5-1.5 =	Low	= 1
2-3 =	Moderate	= 3
5-10 =	High	= 5

9. Erosion Control (Flow or wave dissipation; applies only if site is on shoreline of lake [subject to wave action], river, stream, or other defined drainage; if does not apply, Point Value is 0.)

Size of Rooted Vegetative Component	Score
> 5 acres	= 5
1-5 acres	= 3
< 1 acre	= 1

Calculated Score =

Calcul. Score =	Rating (circle)	Point Val = (circle)
0 =	None	= 0
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

10. Nutrient Cycling (Potential to accumulate, process, and export nutrients [expressed as organic matter].)

Organic Matter Accumulation	Score	(1 Multiply 1) Score	Proximity to Other Aquatic Habitats
Substantial accumulation evident	= 3	3 =	Adjacent or contiguous to other aquatic habitats
Little to no accumulation evident	= 1	1 =	Isolated basin

Calculated Score = 3

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
9 =	High	= 5

11. Groundwater Discharge/Recharge

Wetland:	Criteria	Score
...is a known discharge or recharge area occurs immediately below a dam	A, B, or C true	= 5
C. is a suspected discharge or recharge area due to: _____	D true, all others false	= 3
D. has an outlet, but no inlet	A-D false.	= 1

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

12. Uniqueness (Function of relative abundance of wetland type in Montana and replacement potential of ecological functions.)

Frequency of Occurrence in Montana	Score	(1 Multiply 1) Score	Replacement Potential
Rare	= 3	5 =	Irreplaceable ecological functions
Common	= 2	3 =	Ecological functions replaceable with difficulty
Abundant	= 1	1 =	Ecological functions readily replaceable

Calculated Score = 2

Calcul. Score =	Rating (circle)	Point Val = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-10 =	High	= 5
15 =	Except.	= 10

13. Recreation/Education Potential (Subjective assessment of potential for boating, hunting, birdwatching, photography, and other recreation/education activities; remember to consider access restrictions.)

Recreation Potential	Score	(1 Multiply 1) Score	Education Potential
High	= 3	5 =	High
Moderate	= 2	3 =	Moderate
Low	= 1	1 =	Low

Calcul. Score =	Rating (circle)	Point V = (circl
1-2 =	Low	= 1
3-6 =	Moderate	= 3

DERMA CANYON

Function & Value Summary and Overall Wetland Rating

for Wetland Site(s): WETLAND SAMPLE # 1

Function & Value Parameters	Point Values	Ratings
1. Wetland Size	1	LOW
2. Habitat Diversity	1	LOW
3. Food Chain Support	1	LOW
4. T&E/Proposed/Candidate Species Habitat	0	NONE
5. MNHP Species Habitat	0	NONE
6. General Fish & Wildlife Habitat	1	LOW
7. Flood Control & Storage	3	MOD
8. Sediment Filtration	5	HIGH
9. Erosion Control	0	NONE
10. Nutrient Cycling	3	MOD
11. Groundwater Discharge/Recharge	1	LOW
12. Uniqueness	1	LOW
13. Recreation/Education Potential	1	LOW
TOTAL POINT VALUE	18	

Overall Wetland Rating (Circle appropriate category based on the criteria outlined below):

I II III (IV)

Category I Wetland - Must satisfy one of the following criteria:

- Total Point Value of 65 or more; or
- "Exceptional" ratings for T&E/Proposed/Candidate Species Habitat or Flood Control & Storage or Uniqueness.

Category II Wetland - Does not satisfy criteria for Category I and:

- Total Point Value of 40 - 64; or
- "Exceptional" ratings for MNHP Species Habitat or General Wildlife & Fish Habitat; or
- "High" ratings for Food Chain Support or Uniqueness.

Category III Wetland - Does not satisfy criteria for Category I, Category II, or Category IV.

Category IV Wetland - Does not satisfy criteria for Category I, Category II, or Category III and:

- Total Point Value less than 26; and
- "Low" ratings for Wetland Size and Habitat Diversity.

MDT WETLAND SITE EVALUATION FORM
(Revised June 22, 1994)

Project Name: PERMA CANYON Number: RS 382-1 (5)4

Evaluation Date: 10-14-95 Evaluator(s): REDMOND/KEENE Site Name(s): WETLAND SAMPLE #2 #4

Site Location: MT 382 N. OF PERMA MT

Estimated Total Wetland Size: >10 ACRES Estimated Size Within Proposed ROW:

Conditions During Evaluation: PRTLY SUNNY

Wetland Classification (from MDT Wetland Classification Scheme)

Water Regime (e.g., Permanently flooded)	Wetland Type (e.g., Marsh)	Dominant Species	Modifier (e.g., Impounded) and/or Descriptor	% of Wetland
PERM FLOODED	EMERGENT MARSH	TYPHA, SCIRPUS	RIPARIAN	70%
SEMI PERM FLOOD	EMERGENT MARSH	POPULUS	RIPARIAN	30%

Wetland Type(s) is (are) locally (circle): Rare (Common) Abundant

Brief Descriptive Summary: RIPARIAN WETLAND IN SUNKEN ARROYO

Functions and Values Assessment

1. Wetland Size (All size criteria throughout the assessment refer to the size of the entire wetland.)

Size	Score
> 10 acres	(10)
6 to 10 acres	5
1 to 5 acres	3
< 1 acre	1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	1
3 =	Moderate	3
5 =	High	5
10 =	Except.	(10)

2. Habitat Diversity (Function of wetland type diversity and presence of open water component.)

# of Wetland Types (not including open water types)	(1 Multiply 1) Score	Score	Open Water
≥ 3 types	5	(2)	Present
2 types	(3)	1	Absent
≤ 1 type	1		

Calculated Score = 6

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	1
2-3 =	Moderate	3
5-6 =	High	(5)
10 =	Except.	10

3. Food Chain Support (Function of habitat diversity (HD) and wetland size)

HD Rating (1 Multiply 1) (#2 above)	Score	Score	Size
Low	1	(5)	> 5 acres
Moderate	2	3	1-5 acres
High	(3)	1	< 1 acre
Exceptional	4		

Calculated Score = 15

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	1
3-9 =	Moderate	3
10-15 =	High	(5)
20 =	Except.	10

4. Habitat for Federally-listed Endangered, Threatened, Proposed, or Candidate (C1 or C2) Species

Wetland Receives:	Score
Regular use by such species or is designated critical habitat	10
Occasional use (e.g., infrequent, sporadic use)	5
Incidental use (e.g., chance, inconsequential use)	(3)
No known or suspected use	0

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	0
3 =	Moderate	(3)
5 =	High	5
10 =	Except.	10

Habitat for Species Rated "S1", "S2", or "S3" by the Montana Natural Heritage Program (Not including those addressed under #4 above.)

Wetland Provides:	Score
Breeding or other crucial habitat	10
Habitat that is used regularly	5
Habitat that is used occasionally (e.g., infrequent, sporadic use)	3
Habitat that is used incidentally (e.g., chance, inconsequential use)	(1)
No known or suspected habitat	0

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	0
1 =	Low	(1)
3 =	Moderate	3
5 =	High	5
10 =	Except.	10

6. General Wildlife or Fish Habitat (Non-T&E)

Criteria I (apply to each group)
- ·tandal or significant use = S
- ational or moderate use = M
- Little or no perceived use = L

		Criteria II (apply to entire group)	Score
M	Songbirds	≥ 6 S's or ≥ 8 M's	= 10
L	Raptors	3-5 S's or 6-7 M's	= 5
L	Waterfowl	1-2 S's or 3-5 M's	= 3
L	Marsh & Shorebirds	No S's and ≤ 2 M's	= 1
M	Rodents & Insectivores		
M	Carnivores		
M	Ungulates	Calculated Score = 3	
S	Herptiles		
S	Fish		
M	Invertebrates		

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

7. Flood Control or Storage (Function of floodwater proximity, wetland size, vegetative composition, and flow restriction; Applies only to sites within a a discernable floodplain [based on floodwater proximity, flood deposits, FEMA maps, etc.]; If does not apply, Point Value is 0.)

A.

Wetland Size	Score (1 Multiply 1)	Score	Vegetative Composition
> 5 acres	= 5	3 =	> 50% forested or shrub or combination
1-5 acres	= 3	2 =	10-50% forested or shrub or combination
< 1 acre	= 1	1 =	< 10% forested or shrub or combination

8.

Flow Restriction	Score
Outlet restricted or absent	= 2
Outlet unrestricted	= 1

Calculated Score (A + B) = 16

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
2-3 =	Low	= 1
4-8 =	Moderate	= 3
10-16 =	High	= 5
17 =	Except.	= 10

8. Sediment Filtration and Water Purification (Function of proximity to potential sediment/pollutant source and emergent vegetative component.)

·elihood to Receive Sediment/Pollutants	Score (1 Multiply 1)	Score	Emergent Vegetative Component
·standal accumulations evident or likely	= 2	5 =	> 50% emergent
Moderate accumulations evident or likely	= 1	3 =	10-50% emergent
Accumulations not evident and unlikely	= 0.5	1 =	< 10% emergent

Calculated Score = 5

Calcul. Score =	Rating (circle)	Point Value = (circle)
.5-1.5 =	Low	= 1
2-3 =	Moderate	= 3
5-10 =	High	= 5

9. Erosion Control (Flow or wave dissipation; applies only if site is on shoreline of lake [subject to wave action], river, stream, or other defined drainage; if does not apply, Point Value is 0.)

Site of Rooted Vegetative Component	Score
> 5 acres	= 5
1-5 acres	= 3
< 1 acre	= 1

Calculated Score = 5

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

10. Nutrient Cycling (Potential to accumulate, process, and export nutrients [expressed as organic matter].)

Organic Matter Accumulation	Score (1 Multiply 1)	Score	Proximity to Other Aquatic Habitats
Substantial accumulation evident	= 3	3 =	Adjacent or contiguous to other aquatic habitats
Little to no accumulation evident	= 1	1 =	Isolated basin

Calculated Score = 9

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
9 =	High	= 5

11. Groundwater Discharge/Recharge

Wetland:
- ·. is a known discharge or recharge area
- occurs immediately below a dam
- C. is a suspected discharge or recharge area due to: _____
- D. has an outlet, but no inlet

Criteria	Score
A, B, or C true	= 5
D true, all others false	= 3
A-D false.	= 1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

12. Uniqueness (Function of relative abundance of wetland type in Montana and replacement potential of ecological functions.)

Frequency of Occurrence in Montana	Score (1 Multiply 1)	Score	Replacement Potential
Rare	= 3	5 =	Irreplaceable ecological functions
Common	= 2	3 =	Ecological functions replaceable with difficulty
Abundant	= 1	1 =	Ecological functions readily replaceable

Calculated Score = 6

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-10 =	High	= 5
15 =	Except.	= 10

·3. Recreation/Education Potential (Subjective assessment of potential for boating, hunting, birdwatching, photography, and other recreation/education activities; remember to consider access restrictions.)

Recreation Potential	Score (1 Multiply 1)	Score	Education Potential
High	= 3	5 =	High
Moderate	= 2	3 =	Moderate
Low	= 1	1 =	Low

Calculated Score = 6

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-15 =	High	= 5

PERMA CANYON

Function & Value Summary and Overall Wetland Rating

for Wetland Site(s): CAMAS CREEK WETLAND SAMPLE #2 & #4

Function & Value Parameters	Point Values	Ratings
1. Wetland Size	10	EXCEPT
2. Habitat Diversity	5	HIGH
3. Food Chain Support	5	HIGH
4. T&E/Proposed/Candidate Species Habitat	3	MOD
5. MNHP Species Habitat	1	LOW
6. General Fish & Wildlife Habitat	3	MOD
7. Flood Control & Storage	5	HIGH
8. Sediment Filtration	5	HIGH
9. Erosion Control	5	HIGH
10. Nutrient Cycling	5	HIGH
11. Groundwater Discharge/Recharge	5	HIGH
12. Uniqueness	3	MOD
13. Recreation/Education Potential	3	MOD
TOTAL POINT VALUE	58	

Overall Wetland Rating (Circle appropriate category based on the criteria outlined below):

I (II) III IV

Category I Wetland - Must satisfy one of the following criteria:

- Total Point Value of 65 or more; or
- "Exceptional" ratings for T&E/Proposed/Candidate Species Habitat or Flood Control & Storage or Uniqueness.

Category II Wetland - Does not satisfy criteria for Category I and:

- Total Point Value of 40 - 64; or
- "Exceptional" ratings for MNHP Species Habitat or General Wildlife & Fish Habitat; or
- "High" ratings for Food Chain Support or Uniqueness.

Category III Wetland - Does not satisfy criteria for Category I, Category II, or Category IV.

Category IV Wetland - Does not satisfy criteria for Category I, Category II, or Category III and:

- Total Point Value less than 26; and
- "Low" ratings for Wetland Size and Habitat Diversity.

MDT WETLAND SITE EVALUATION FORM
(Revised June 22, 1994)

Project Name: PERMA CANYON Number: RS 382 - 1 (5) 4

Evaluation Date: 10-14-95 Evaluator(s): REDMOND/KEENE Site Name(s): WETLAND SAMPLE #3

Site Location: MT 382 NORTH OF PERMA MT

Estimated Total Wetland Size: 3 ACRES Estimated Size Within Proposed ROW:

Conditions During Evaluation: PRTLY CLOUDY

Wetland Classification (from MDT Wetland Classification Scheme)

Water Regime (e.g., Permanently flooded)	Wetland Type (e.g., Marsh)	Dominant Species	Modifier (e.g., Impounded) and/or Descriptor	% of Wetland
TEMP FLOODED	FORESTED DECIDUOUS	POPULUS TREMULOIDES	RIPARIAN ±	80%
TEMP FLOODED	EMERGENT MARSH	PHALARIS ARUNDINACEA	EXCAVATED DITCH	20%

Wetland Type(s) is (are) locally (circle): Rare (Common) Abundant

Brief Descriptive Summary: THIS IS A FORESTED/HERBACEOUS SWALE THAT GATHERS SURFACE FLOW DURING EVENTS. PARTIALLY EXCAVATED

Functions and Values Assessment

1. Wetland Size (All size criteria throughout the assessment refer to the size of the entire wetland.)

Size	Score
> 10 acres	= 10
6 to 10 acres	= 5
1 to 5 acres	(= 3)
< 1 acre	= 1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	(= 3)
5 =	High	= 5
10 =	Except.	= 10

2. Habitat Diversity (Function of wetland type diversity and presence of open water component.)

# of Wetland Types (not including open water types)	(1 Multiply 1) Score	Score	Open Water
≥ 3 types	= 5	2 =	Present
2 types	(= 3)	(1 =)	Absent
≤ 1 type	= 1		

Calculated Score = 3

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
2-3 =	Moderate	(= 3)
5-6 =	High	= 5
10 =	Except.	= 10

3. Food Chain Support (Function of habitat diversity (HD) and wetland size)

HD Rating (1 or #2 above)	(1 Multiply 1) Score	Score	Size
Low	= 1	5 =	> 5 acres
Moderate	(= 2)	(3 =)	1-5 acres
High	= 3	1 =	< 1 acre
Exceptional	= 4		

Calculated Score = 6

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= 1
3-9 =	Moderate	(= 3)
10-15 =	High	= 5
20 =	Except.	= 10

4. Habitat for Federally-listed Endangered, Threatened, Proposed, or Candidate (C1 or C2) Species

Wetland Receives:	Score
Regular use by such species or is designated critical habitat	= 10
Occasional use (e.g., infrequent, sporadic use)	= 5
Incidental use (e.g., chance, inconsequential use)	(= 3)
No known or suspected use	= 0

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
3 =	Moderate	(= 3)
5 =	High	= 5
10 =	Except.	= 10

Habitat for Species Rated "S1", "S2", or "S3" by the Montana Natural Heritage Program (Not including those addressed under #4 above.)

Wetland Provides:	Score
Breeding or other crucial habitat	= 10
Habitat that is used regularly	= 5
Habitat that is used occasionally (e.g., infrequent, sporadic use)	(= 3)
Habitat that is used incidentally (e.g., chance, inconsequential use)	= 1
No known or suspected habitat	= 0

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
1 =	Low	= 1
3 =	Moderate	(= 3)
5 =	High	= 5
10 =	Except.	= 10

6. General Wildlife & Fish Habitat (Non-T&E)

Criteria I (apply to each group)
- ...tandal or significant use = S
- ...ional or moderate use = M
- Little or no perceived use = L

		Criteria II (apply to entire group)	Score
M	Songbirds	≥ 6 S's or ≥ 8 M's	= 10
L	Raptors	3-5 S's or 6-7 M's	= 5
L	Waterfowl	1-2 S's or 3-5 M's	= 3
L	Marsh & Shorebirds	No S's and ≤ 2 M's	= 1
M	Rodents & Insectivores		
M	Carnivores		
S	Ungulates	Calculated Score = 3	
L	Herptiles		
L	Fish		
L	Invertebrates		

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= (3)
5 =	High	= 5
10 =	Except.	= 10

7. Flood Control & Storage (Function of floodwater proximity, wetland size, vegetative composition, and flow restriction; Applies only to sites within a discernable floodplain [based on floodwater proximity, flood deposits, FEMA maps, etc.]; If does not apply, Point Value is 0.)

A. Wetland Site	Score	(1 Multiply 1) Score	Vegetative Composition
> 5 acres	= 5	(3) =	> 50% forested or shrub or combination
1-5 acres	(2)	2 =	10-50% forested or shrub or combination
< 1 acre	= 1	1 =	< 10% forested or shrub or combination

B. Flow Restriction	Score
Outlet restricted or absent	= 2
Outlet unrestricted	(1)

Calculated Score (A + B) = 10

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
2-3 =	Low	= 1
4-8 =	Moderate	= 3
10-16 =	High	= (5)
17 =	Except.	= 10

8. Sediment Filtration and Water Purification (Function of proximity to potential sediment/pollutant source and emergent vegetative component.)

Likelihood to Receive Sediment/Pollutants	Score	(1 Multiply 1) Score	Emergent Vegetative Component
...tandal accumulations evident or likely	= 2	(5) =	> 50% emergent
Moderate accumulations evident or likely	(1)	3 =	10-50% emergent
Accumulations not evident and unlikely	= 0.5	1 =	< 10% emergent

Calculated Score = 5

Calcul. Score =	Rating (circle)	Point Value = (circle)
.5-1.5 =	Low	= 1
2-3 =	Moderate	= 3
5-10 =	High	= (5)

9. Erosion Control (Flow or wave dissipation; applies only if site is on shoreline of lake [subject to wave action], river, stream, or other defined drainage; if does not apply, Point Value is 0.)

Size of Rooted Vegetative Component	Score
> 5 acres	= 5
1-5 acres	= 3
< 1 acre	= 1

Calculated Score = ____

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= (0)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

10. Nutrient Cycling (Potential to accumulate, process, and export nutrients [expressed as organic matter].)

Organic Matter Accumulation	Score	(1 Multiply 1) Score	Proximity to Other Aquatic Habitats
Substantial accumulation evident	= 3	3 =	Adjacent or contiguous to other aquatic habitats
Little to no accumulation evident	(1)	(1) =	Isolated basin

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= (1)
3 =	Moderate	= 3
9 =	High	= 5

11. Groundwater Discharge/Recharge

Wetland:	Criteria	Score
...is a known discharge or recharge area occurs immediately below a dam	A, B, or C true	= 5
C. is a suspected discharge or recharge area due to: _____	D true, all others false	= 3
D. has an outlet, but no inlet	A-D false.	(1)

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= (1)
3 =	Moderate	= 3
5 =	High	= 5

12. Uniqueness (Function of relative abundance of wetland type in Montana and replacement potential of ecological functions.)

Frequency of Occurrence in Montana	Score	(1 Multiply 1) Score	Replacement Potential
Rare	= 3	5 =	Irreplaceable ecological functions
Common	(2)	3 =	Ecological functions replaceable with difficulty
Abundant	= 1	(1) =	Ecological functions readily replaceable

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= (1)
3-6 =	Moderate	= 3
9-10 =	High	= 5
15 =	Except.	= 10

13. Recreation/Education Potential (Subjective assessment of potential for boating, hunting, birdwatching, photography, and other recreation/education activities; remember to consider access restrictions.)

Recreation Potential	Score	(1 Multiply 1) Score	Education Potential
High	= 3	5 =	High
Moderate	= 2	(3) =	Moderate
Low	(1)	1 =	Low

Calculated Score = 3

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= (3)
9-15 =	High	= 5

PERMA CANYON

Function & Value Summary and Overall Wetland Rating

for Wetland Site(s): WETLAND SAMPLE #3

Function & Value Parameters	Point Values	Ratings
1. Wetland Size	3	MOD
2. Habitat Diversity	3	MOD
3. Food Chain Support	3	MOD
4. T&E/Proposed/Candidate Species Habitat	3	MOD
5. MNHP Species Habitat	3	MOD
6. General Fish & Wildlife Habitat	3	MOD
7. Flood Control & Storage	5	HIGH
8. Sediment Filtration	5	HIGH
9. Erosion Control	0	NONE
10. Nutrient Cycling	1	LOW
11. Groundwater Discharge/Recharge	1	LOW
12. Uniqueness	1	LOW
13. Recreation/Education Potential	3	MOD
TOTAL POINT VALUE	34	

Overall Wetland Rating (Circle appropriate category based on the criteria outlined below):

I II (III) IV

Category I Wetland - Must satisfy one of the following criteria:

- Total Point Value of 65 or more; or
- "Exceptional" ratings for T&E/Proposed/Candidate Species Habitat or Flood Control & Storage or Uniqueness.

Category II Wetland - Does not satisfy criteria for Category I and:

- Total Point Value of 40 - 64; or
- "Exceptional" ratings for MNHP Species Habitat or General Wildlife & Fish Habitat; or
- "High" ratings for Food Chain Support or Uniqueness.

Category III Wetland - Does not satisfy criteria for Category I, Category II, or Category IV.

Category IV Wetland - Does not satisfy criteria for Category I, Category II, or Category III and:

- Total Point Value less than 26; and
- "Low" ratings for Wetland Size and Habitat Diversity.

TERMA CANYON

Function & Value Summary and Overall Wetland Rating

for Wetland Site(s): WETLAND SAMPLE #3

Function & Value Parameters	Point Values	Ratings
1. Wetland Size	3	MOD
2. Habitat Diversity	3	MOD
3. Food Chain Support	3	MOD
4. T&E/Proposed/Candidate Species Habitat	3	MOD
5. MNHP Species Habitat	3	MOD
6. General Fish & Wildlife Habitat	3	MOD
7. Flood Control & Storage	5	HIGH
8. Sediment Filtration	5	HIGH
9. Erosion Control	0	NONE
10. Nutrient Cycling	1	LOW
11. Groundwater Discharge/Recharge	1	LOW
12. Uniqueness	1	LOW
13. Recreation/Education Potential	3	MOD
TOTAL POINT VALUE	34	

Overall Wetland Rating (Circle appropriate category based on the criteria outlined below):

I II (III) IV

Category I Wetland - Must satisfy one of the following criteria:

- Total Point Value of 65 or more; or
- "Exceptional" ratings for T&E/Proposed/Candidate Species Habitat or Flood Control & Storage or Uniqueness.

Category II Wetland - Does not satisfy criteria for Category I and:

- Total Point Value of 40 - 64; or
- "Exceptional" ratings for MNHP Species Habitat or General Wildlife & Fish Habitat; or
- "High" ratings for Food Chain Support or Uniqueness.

Category III Wetland - Does not satisfy criteria for Category I, Category II, or Category IV.

Category IV Wetland - Does not satisfy criteria for Category I, Category II, or Category III and:

- Total Point Value less than 26; and
- "Low" ratings for Wetland Size and Habitat Diversity.